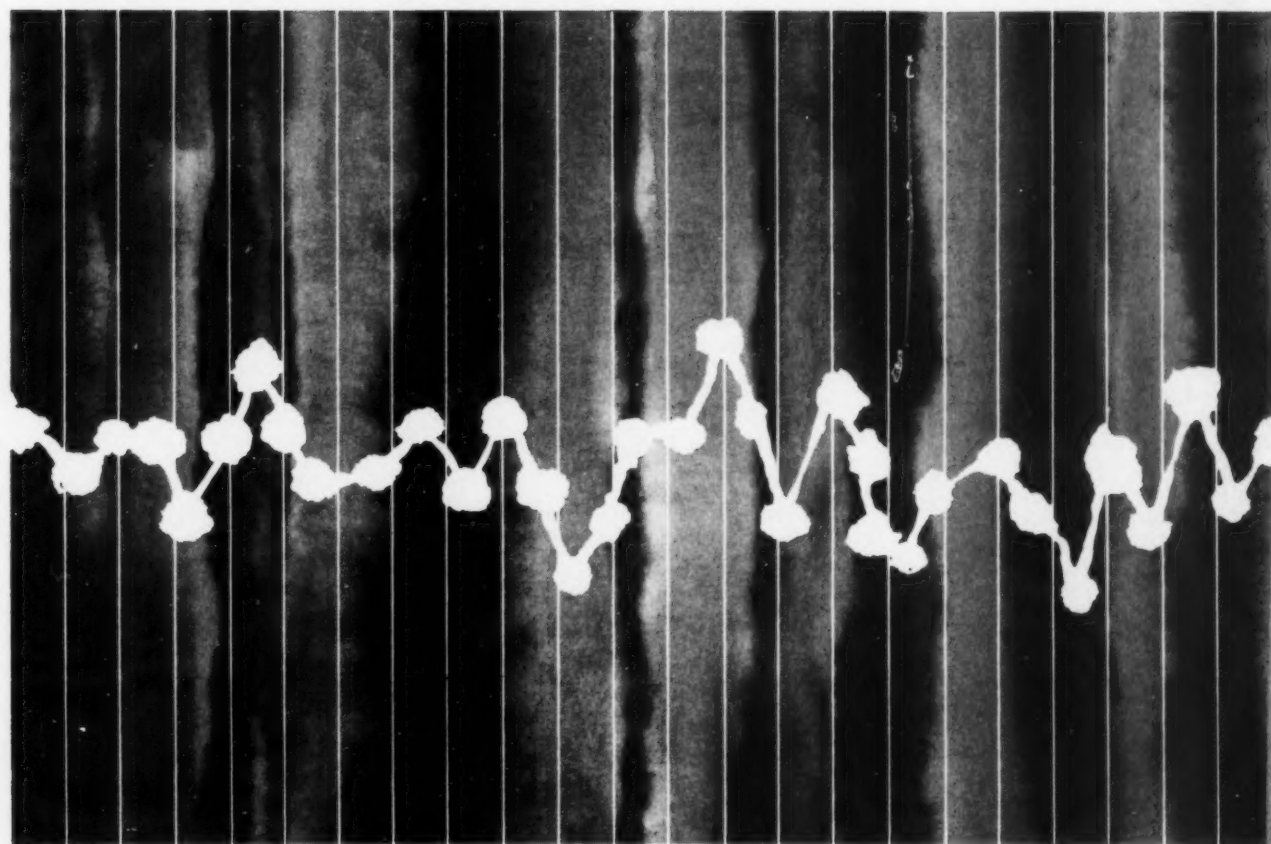


defense indicators

FEBRUARY 1974



U.S. DEPARTMENT OF COMMERCE • Social and Economic Statistics Administration • BUREAU OF ECONOMIC ANALYSIS



U. S. DEPARTMENT OF COMMERCE

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BUREAU OF ECONOMIC ANALYSIS

George Jaszi, Director

Morris R. Goldman, Deputy Director

Feliks Tamm, Editor

This report was prepared in the Statistical Indicators Division, Bureau of Economic Analysis. Technical staff and their responsibilities for the publication are—

Barry A. Beckman—Technical supervision and review,

Morton Somer—Selection of seasonal adjustment methods,

Betty F. Tunstall—Collection and compilation of basic data.

The cooperation of various government agencies which provide data is gratefully acknowledged.

Subscription price is \$11.00 a year (\$2.75 additional for foreign mailing). Single issues are 95 cents.

Airmail delivery is available at an additional charge. For information about domestic or foreign airmail delivery, write to the Superintendent of Documents (address below) enclosing a copy of your address label. Make checks payable to the Superintendent of Documents. Send to U.S. Government Printing Office, Washington, D.C. 20462.

The Secretary of Commerce has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this Department. Use of funds for printing this periodical has been approved by the Director of the Office of Management and Budget through September 1, 1975.

This publication is prepared under the general guidance of an interagency committee established by the Office of Management and Budget. This committee consists of the following persons:

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Office of Management and Budget

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**Rose Glubin, Office of Assistant Secretary of Defense
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**Charles Waite, Bureau of Economic Analysis, Department
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defense indicators

February 1974
Series ES4 No. 74-2

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6 SESA PROJECTS for economic analysis

BUSINESS CONDITIONS DIGEST A monthly report for analyzing economic fluctuations over a short span of years.

This report brings together approximately 600 economic time series in a form convenient for analysts whether their approach to the study of current business conditions and prospects is the national income model, the leading indicators, anticipations and intentions, or a combination of these. Other types of data such as foreign trade, Federal Government activities, and international series are included to facilitate a more complete analysis.

Data are presented in charts and tables. Appendixes provide historical data, series descriptions, seasonal adjustment factors, and measures of variability. A computer tape containing data for most of the series is available for purchase.

DEFENSE INDICATORS A monthly report for analyzing the current and prospective impact of defense activity on the national economy.

This report brings together the principal time series on defense activities which influence short-term changes in the national economy. These include series on obligations, contracts, orders, shipments, inventories, expenditures, employment, and earnings. The approximately 60 time series included are grouped in accordance with the time at which the activities they measure occur in the defense order-production-delivery process. Charts and analytical tables facilitate interpretation.

LONG TERM ECONOMIC GROWTH A report for the study of economic trends over a long span of years, 1860-1970.

This report has been developed from available statistics to provide a comprehensive, long-range view of the U.S. economy. It is a basic research document for economists, historians, investors, teachers, and students. It brings together under one cover, in meaningful and convenient form, the complete statistical basis for a study of long-term economic trends. A computer tape file of the time series included in the report is available for purchase.

COMPUTER PROGRAMS FOR TIME SERIES ANALYSIS The source statements for FORTRAN IV programs used by SESA in its analysis of time series are available on a single computer tape.

SEASONAL ADJUSTMENT PROGRAMS.—Two variants of the Census computer program for measuring and analyzing seasonal, trading-day, cyclical, and irregular fluctuations. They are particularly useful in analyzing economic fluctuations which take place within a year. The X-11 variant is used for adjusting monthly data and the X-11Q for quarterly data. These programs make additive as well as multiplicative adjustments and compute many summary and analytical measures.

DIFFUSION INDEX PROGRAM.—A computer program for computing diffusion indexes, cumulated diffusion indexes, and summary measures of the properties of each index.

SURVEY OF CURRENT BUSINESS A monthly report for analyzing current economic developments.

This report provides a useful combination of current data for more than 2,500 statistical series and significant articles analyzing economic developments. These data and analyses include such areas as the national income and product accounts, the balance of payments accounts, plant and equipment expenditures, regional personal income, and the input-output accounts.

BUSINESS STATISTICS A biennial reference volume containing statistical series reported currently in the *Survey of Current Business*.

This report provides historical data back to 1947 for nearly 2,500 time series. The series are accompanied by concise descriptions as to their composition, methods of compilation, comparability, revisions, and availability. Also listed are the names and addresses of organizations which provide the basic data for the series.

Introduction

The purpose of this monthly report is to bring together the principal time series on defense activity which influence short-term changes in the national economy. These include series on obligations, contracts, orders, shipments, inventories, expenditures, employment, and earnings. Most are monthly but a few quarterly series are included. The series numbers used are for identification purposes only and do not reflect relationships or order.

Classification of Series

Chart 1 compares Government purchases of goods and services for national defense with total gross national product. GNP is the market value of the final output of goods and services produced by the Nation's economy and represents a very broad measure of aggregate economic activity. In addition to national defense purchases, it includes Federal Government purchases of goods and services for nondefense purposes, State and local government purchases, personal consumption expenditures, gross private domestic investment, and net exports of goods and services. Chart 1 also presents national defense purchases as a percent of gross national product and, for both series, changes from the previous quarter.

A related group of series is shown in Chart 4, "Defense-Related Balance of Payments Components." These series show the effects of defense-related economic activity on the balance of payments accounts.

The remaining series are grouped in accordance with the time at which the activities they measure occur within the defense order-production-delivery process. Those series measuring activities that usually precede production, such as new orders placed with defense products industries and contract awards, are presented in Chart 2, "Advance Indicators of Defense Activity." Chart 3, "Intermediate and Final Indicators of Defense Activity," presents series that measure activities which tend to move at the same time as production (such as employment) and activities which usually follow production (such as shipments).

Series Included

Following is a list of the series as they appear in charts 1, 2, 3, and 4 (the source agencies are abbreviated in parentheses; detailed lists of sources for charts 1, 2, and 3 appeared as appendixes to the August and October 1968 issues of this report).

Gross National Product and National Defense Purchases

- Gross national product (BEA)
- Federal Government purchases of goods and services, national defense (BEA)
- National defense purchases as a percent of gross national product (BEA)
- Gross national product, changes from previous quarter (BEA)
- National defense purchases, changes from previous quarter (BEA)

Advance Indicators of Defense Activity

- Defense Department gross obligations incurred, total (DOD)
- Defense Department gross obligations incurred, procurement (DOD)
- Gross obligations incurred outside the Government for national defense (Treasury)

Defense Department military prime contract awards for work performed in the United States (DOD)

Defense Department gross unpaid obligations outstanding (DOD)

Manufacturers' new orders (Census):

- Defense products industries

- Defense products

Manufacturers' new orders from the U.S. Government, aerospace industries (Census):

Average weekly overtime hours, production workers, defense products industries (BLS)

Accessions, defense products industries (BLS)

Layoffs, defense products industries (BLS)

Intermediate and Final Indicators of Defense Activity

Manufacturers' inventories (Census):

- Defense products industries

- Defense products

Manufacturers' unfilled orders (Census):

- Defense products industries

- Defense products

Manufacturers' unfilled orders from the U.S. Government, aerospace industries (Census)

Defense Department progress payments outstanding (DOD)

Employment in defense products industries, total (BLS)

Employment in defense products industries, production workers (BLS)

Index of aggregate weekly man-hours, defense products industries (BLS)

Index of aggregate weekly payrolls, production workers, defense products industries (BLS)

Defense Department manpower, military (DOD)

Defense Department manpower, civilian (DOD)

Defense Department net outlays, total, military functions and military assistance (DOD)

Defense Department net outlays, procurement (DOD)

Budget outlays for the national defense function (Treasury)

Defense Department personnel compensation (DOD)

Manufacturers' shipments (Census):

- Defense products industries

- Defense products

Manufacturers' shipments to the U.S. Government, aerospace industries (Census):

Ratio, manufacturers' unfilled orders to shipments (Census):

- Defense products industries

- Defense products

Ratio, manufacturers' inventories to shipments (Census):

- Defense products industries

- Defense products

Defense-Related Balance of Payments Components

Transfers under U.S. military agency sales contracts—exports (BEA)

Direct defense expenditures—imports (BEA)

U.S. Government cash receipts associated with military sales contracts (BEA)

Some additional data are included in the tables though not presented in the charts. These include Defense Department military prime contract awards by procurement category (e.g., for aircraft, missiles and space systems, ships, weapons, and munitions), the operations component of Defense Department

gross obligations incurred, gross unpaid obligations outstanding, and net outlays and the procurement component of gross unpaid obligations outstanding.

Description of Basic Data

The Department of Defense compiles statistics on obligations, contract awards, personnel compensation, and outlays. The DOD obligations and outlays data are based on the Defense Department's monthly *Status of Funds* report which is developed from accounting data and is designed to provide information on the total status of Defense Department financing. Accounts included in this report are aggregated by appropriation categories including personnel costs, operations and maintenance, procurement, research and development, and construction. The *Status of Funds* report duplicates some obligations. That is, obligations of one government unit to another unit are not netted out.

The Defense Department's *Contract Awards* report covers the awarding of procurement contracts. These include obligations for operating and maintenance supplies, equipment and services, research and development, and construction in addition to the obligations for items that constitute the fiscal "procurement" category. The statistics are aggregated by commodity categories including aircraft, missile and space systems, ships, weapons, ammunition, electronics and communication equipment, fuels, and textiles and clothing. The *Contract Awards* report includes procurement for NASA, other nondefense agencies, and the Foreign Military Sales Program which are not included in the *Status of Funds* report.

The Census quarterly new orders, unfilled orders and shipments series for "aerospace industries" are based on reports of companies classified into the following industry categories:

Industry	SIC Code
Aircraft and parts	372
Guided missiles and space vehicles, completely assembled ..	1925

The Census and BLS data for "defense products industries" presented in this report cover companies and establishments¹ classified into the following industry categories in accordance with the *Standard Industrial Classification Manual*, 1967 edition, Executive Office of the President, Bureau of the Budget:

Industry	SIC Code
Ordnance and accessories	19
Communication equipment	366
Aircraft and parts	372

Establishments reporting to the BLS are classified into industries on the basis of their principal product or activity as determined from information on annual sales volume, which is collected each year on a supplement to the monthly report. The entire employment of an establishment making more than one product or engaging in more than one activity is included under the industry accounting for the largest percentage of the annual sales of that establishment.

The Census Bureau's monthly survey is based primarily on reports at the company level and the monthly estimates are benchmarked to the establishment data from the *Annual Survey*

¹An establishment is a single physical location where business is conducted (e.g., a plant). A company often includes more than one establishment.

of Manufactures. Also, many of the large diversified companies file separate divisional reports monthly. Although the reports in the survey are also classified according to their principal product or activity, this difference in the organizational level from which reports are received results in firms being classified into different industries in the BLS and Census surveys and, consequently, limits somewhat the comparability of the data collected by these agencies. However, as we know from past studies in this area, some differences in industrial classification between BLS and Census data would remain even if reports came from the same organizational levels.

Both the Census and the BLS data include a significant amount of nondefense activities carried on by companies and establishments classified in the above industries. For example, the data cover the production of commercial as well as military aircraft. On the other hand, they exclude significant amounts of defense work carried on by companies and establishments classified in industries other than those listed above (e.g., the manufacture of military uniforms and the shipbuilding industry).²

Census data for "defense products" are based on separate reports on defense work filed by large defense contractors in the ordnance, communications, complete aircraft, aircraft parts, and shipbuilding industries. Thus, they differ from the "defense products industries" data in that they include defense activity in the shipbuilding industry and exclude nondefense work in the other industries covered. Defense products data cover work for the Department of Defense and exclude contracts for the National Aeronautics and Space Administration and the Atomic Energy Commission.

The DOD data are not strictly comparable in coverage with either the BLS or the Census data since the Defense Department figures (1) cover products of industries not included in the defense products category; (2) generally do not include nondefense activities (except that some series, such as contract awards, include activities by the Department of Defense on behalf of nondefense agencies); and (3) do not cover intermediate activities such as those related to subcontracting and supplying of parts. Thus, the Census Bureau data for manufacturers' new orders and shipments of defense products industries, for example, differ in coverage from the DOD contract awards and net outlays series.

The Department of Defense data are not comparable with Federal Government purchases of goods and services for national defense or the Treasury Department obligations and outlays data since the BEA and Treasury data cover defense-related activities of other agencies such as the Atomic Energy Commission, the Selective Service System, and the Office of Emergency Planning.

Projects to improve the comparability of the data collected by the Bureau of the Census, the Bureau of Labor Statistics, and the Department of Defense and to improve the separation of defense and nondefense activity for the Census and BLS data are being undertaken by the statistical agencies under the leadership of the Interagency Committee mentioned earlier in this report.

²See the Bureau of the Census publication *Shipments of Defense-Oriented Industries*, Current Industrial Reports, Series MA-175, for annual estimates of shipments by industry to the Department of Defense, the National Aeronautics and Space Administration, and the Atomic Energy Commission. Included also are industries not covered by the "defense products industries" category.

Variability of Data

Seasonal variations dominate the movements of many time series, and adjustments for average seasonal fluctuations are often necessary to bring out the underlying trends of the series. These seasonal adjustments allow for the effects of repetitive intrayear variations resulting primarily from normal differences in weather conditions and from various institutional arrangements. An additional adjustment is sometimes necessary for series which contain considerable variation resulting from the number of working or trading days in each month. As used in this report, the term "seasonal adjustment" includes trading-day adjustments where they have been made.

Most of the series in this report are shown in seasonally adjusted form. For Defense Department and BLS series, unadjusted data are also shown since they are not readily available elsewhere. Current seasonal adjustment factors are shown in appendix A.

The effect of seasonal adjustment in reducing the month-to-month variation in the data can be seen in appendix B. There, the first two columns show the average month-to-month percent change (without regard to sign) in the data before and after seasonal adjustment. Some series still show very irregular month-to-month movements after adjustment for seasonal variation. The measures in appendix B also indicate the month-to-month variation in the irregular and short-term trend components of the series. For many series, irregular movements tend to dominate 1- or 2-month comparisons, and the underlying short-term trend becomes dominant in comparisons over longer spans. The "months for cyclical dominance" (MCD) measure estimates the span of months required for the short-term trend to dominate the irregular component. Series with an MCD of 4 or more are supplemented with a moving average (with the

number of terms equal to MCD) in the charts. Data for these moving averages are listed in the basic data tables.

Guide to Charts and Tables

Most series are plotted on a standard ratio scale so that equal percent changes cover the same vertical distance. For these series, an increase of 100 percent covers approximately 1 inch. Arithmetic scales are used for series with zero or negative data, series which could approach zero (e.g., average overtime hours and layoff rate), and series expressed in percent.

In general, monthly data are plotted with a solid line and quarterly data are represented by a solid line with quarterly plot points. Quarterly series are also identified with a "Q" after their titles. For series which include a moving average, a dashed line is used for the actual monthly data and a solid line for the moving average. (The moving average values are centered within the span of months they are computed from.) Exceptions to this scheme may be necessary for special situations. Data apply to the whole period except for series designated "EOM" (end of month) or "EOQ" (end of quarter). The number in the box at the right of each series indicates the latest month (Arabic) or quarter (Roman) plotted. Parallel lines across a series indicate a break in continuity (e.g., data not available or change in series definition).

Tables 1, 2, 3, and 4 present current data for the series shown in the charts, including the moving averages. They also include unadjusted data for some series and data for related series which are not plotted. Table A summarizes the most recent data and percent changes for many of the series in the report. Historical data are shown on an intermittent basis in appendix C. (The index indicates the appropriate issue for each series.)

New Features and Changes For This Issue

1. A new series (series 638) covering military prime contract awards for the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) has been added to the report. Data for this series begin in October 1972. Further information concerning this series may be obtained from the Office of the Secretary of Defense (Comptroller), Procurement and Information Office, U.S. Department of Defense.

2. The series on manufacturers' shipments, inventories and orders, defense products industries (series 647, 658, 660, 687, 690, and 692), were discontinued by the source agency in June 1972. Beginning with this issue, data for these series will no longer be shown in tabular form in this report; however, they will continue to be shown in the charts to provide historical comparisons.

The March issue of DEFENSE INDICATORS is scheduled for release on March 28.

Table A. Summary of Recent Data and Current Percent Changes for Principal Defense Indicators

(Preliminary and revised figures are not identified here but the user may consult tables 1, 2, 3, and 4 where such identification is given)

Series title	Unit of measure	Basic data								Percent change				Series number
		Average		2d Q 1973	3d Q 1973	4th Q 1973	Nov. 1973	Dec. 1973	Jan. 1974	Nov. '73 to Dec. '73	Dec. '73 to Jan. '74	2d Q '73 to 3d Q '73	3d Q '73 to 4th Q '73	
		1972	1973											
GROSS NATIONAL PRODUCT AND NATIONAL DEFENSE PURCHASES														
200. Gross national product (BEA)	Ann. rate, bil. dol.	1155.2	1289.1	1272.0	1304.5	1337.5	...	...	...	...	...	2.6	2.5	200
264. Federal Government purchases of goods and services, national defense (BEA)	do	74.4	73.9	74.2	74.2	73.0	...	...	...	...	...	0.0	-1.6	264
613. National defense purchases as a percent of GNP (BEA) ¹	Percent	6.4	5.7	5.8	5.7	5.5	...	...	...	...	...	-0.1	-0.2	613
ADVANCE INDICATORS OF DEFENSE ACTIVITY														
Defense Dept. gross obligations incurred (DOD): 617. Total	Ann. rate, bil. dol.	84.8	NA	81.9	85.5	87.2	91.8	76.8	NA	-16.3	NA	4.4	2.0	617
621. Procurement	do	20.3	NA	18.5	16.7	19.7	22.2	13.5	NA	-39.2	NA	-9.7	18.0	621
623. Gross obligations incurred outside the Federal Government for national defense (Treasury)	do	88.7	89.2	82.7	90.7	92.5	91.1	78.6	NA	-13.7	NA	9.7	2.0	623
625. Defense Department military prime contract awards for work performed in the U.S. (DOD)	do	36.0	NA	34.3	34.6	37.7	43.6	33.3	NA	-23.6	NA	0.9	9.0	625
643. Defense Department gross unpaid obligations outstanding (DOD)	Bil. dol., end of period	34.2	36.8	35.3	36.1	36.8	36.9	36.8	NA	-0.3	NA	2.3	1.9	643
648. Mfrs.' new orders, defense products (Census)	Ann. rate, bil. dol.	20.7	21.4	23.9	18.5	21.6	25.8	16.1	26.1	-37.6	62.1	-22.6	16.8	648
650. Manufacturers' new orders from the U.S. Government, aerospace industries (Census)	do	15.2	NA	19.0	13.6	NA	...	...	...	...	...	-28.4	NA	650
653. Average weekly overtime hours, production workers, defense products industries (BLS) ¹	Hours	2.8	3.1	3.0	3.0	3.2	3.3	3.4	NA	0.1	NA	0.0	0.2	653
654. Accessions, defense products industries (BLS) ¹	Number per 100 employees ..	2.1	NA	2.2	2.3	NA	2.3	NA	NA	NA	NA	0.1	NA	654
655. Layoffs, defense products industries (BLS) ¹	do	0.8	NA	0.7	0.6	NA	0.7	NA	NA	NA	NA	-0.1	NA	655
656. Job vacancy rate, defense products industries (BLS) ¹ (2)	Percent	1.0	1.3	1.3	1.4	1.3	1.3	1.1	NA	-0.2	NA	0.1	-0.1	656
INTERMEDIATE AND FINAL INDICATORS OF DEFENSE ACTIVITY														
657. Output of defense and space equipment (FRB) ...	1967=100	77.9	NA	79.9	80.2	80.3	80.0	80.9	80.6	1.1	-0.4	0.4	0.1	657
659. Mfrs.' inventories, defense products (Census)	Bil. dol., end of period ..	5.1	5.6	5.5	5.5	5.6	5.5	5.6	NA	1.8	NA	0.0	1.8	659
661. Mfrs.' unfilled orders, defense products (Census) ..	do	19.6	21.3	20.9	20.7	21.3	21.5	21.3	21.8	-0.9	2.3	-1.0	2.9	661
664. Manufacturers' unfilled orders from the U.S. Government, aerospace industries (Census)	do	15.3	NA	16.3	15.7	NA	...	...	...	...	...	-3.7	NA	664
666. Defense Department progress payments outstanding (DOD) (2)	do	6.7	7.4	7.0	7.1	7.4	...	...	...	...	...	1.4	4.2	666
Employment in defense products industries (BLS): 670. Total	Thousands	1,119	1,144	1,144	1,144	1,150	1,150	1,154	1,146	0.3	-0.7	0.0	0.5	670
671. Production workers	do	581	606	606	605	608	606	611	607	0.8	-0.7	-0.2	0.5	671
673. Index of aggregate weekly man-hours, defense products industries (BLS)	1967=100	66.6	68.1	68.1	68.1	68.4	68.4	68.7	NA	0.4	NA	0.0	0.4	673
675. Index of aggregate weekly payrolls, production workers, defense products industries (BLS)	do	61.2	90.3	89.3	90.9	93.2	92.7	94.3	NA	1.7	NA	1.8	2.5	675
Defense Department manpower (DOD) (2): 677. Military	Thousands, end of period ..	2,348	2,202	2,253	2,232	2,202	2,218	2,202	2,202	-0.7	0.0	-0.9	-1.3	677
678. Civilian	do	1,082	1,026	1,031	1,019	1,026	1,026	1,026	NA	0.0	NA	-1.2	0.7	678
Defense Department net outlays (DOD): 680. Total, military functions and military assistance	Ann. rate, bil. dol.	75.6	76.3	75.5	75.7	77.2	81.4	74.1	79.3	-9.0	7.0	0.3	2.0	680
682. Procurement	do	17.1	15.7	16.4	14.9	15.6	15.3	14.0	15.9	-8.5	13.6	-9.1	4.7	682
683. Budget outlays for the national defense function (Treasury)	do	77.7	77.9	77.9	75.4	78.6	84.2	74.8	NA	-11.2	NA	-3.2	4.2	683
685. Defense Dept. personnel compensation (DOD)	do	32.0	32.4	31.9	32.2	32.8	33.4	32.2	NA	-3.6	NA	0.9	1.9	685
688. Mfrs.' shipments, defense products (Census)	do	18.3	19.7	19.9	19.3	19.5	19.3	18.6	19.6	-3.6	5.4	-3.0	1.0	688
689. Manufacturers' shipments to the U.S. Government, aerospace industries (Census)	do	13.5	NA	14.8	14.9	NA	...	...	...	...	...	0.7	NA	689
691. Ratio, manufacturers' unfilled orders to shipments, defense products (Census)	Ratio	12.4	12.6	12.4	12.9	13.1	13.4	13.7	13.3	2.2	-2.9	4.0	1.6	691
693. Ratio, manufacturers' inventories to shipments, defense products (Census)	do	3.2	3.3	3.3	3.4	3.4	3.4	3.6	NA	5.9	NA	3.0	0.0	693
DEFENSE-RELATED BALANCE OF PAYMENTS COMPONENTS														
546. Transfers under U.S. military agency sales contracts-exports (BEA) ¹	Ann. rate, mil. dol.	1,166	NA	1,820	2,136	NA	...	...	...	...	...	316	NA	546
547. Direct defense expenditures-imports (BEA) ¹ (2) ..	do	4,724	NA	4,740	4,440	NA	...	...	...	...	...	-300	NA	547
696. U.S. Government cash receipts associated with military sales contracts (BEA) ¹	do	1,391	NA	2,180	2,596	NA	...	...	...	...	...	416	NA	696

NOTE: This table is presented as a convenient summary of the current data for many of the indicators in this report. In many cases, data shown here are rounded to fewer digits or are in different units than those shown in tables 1, 2, 3, and 4. Where available, annual figures are those published by the source agencies; otherwise they (and the quarterly figures for monthly series) are averages or totals of the data as shown in the data tables. Series are seasonally adjusted except for those indicated by (2), which appear to contain no seasonal movement.

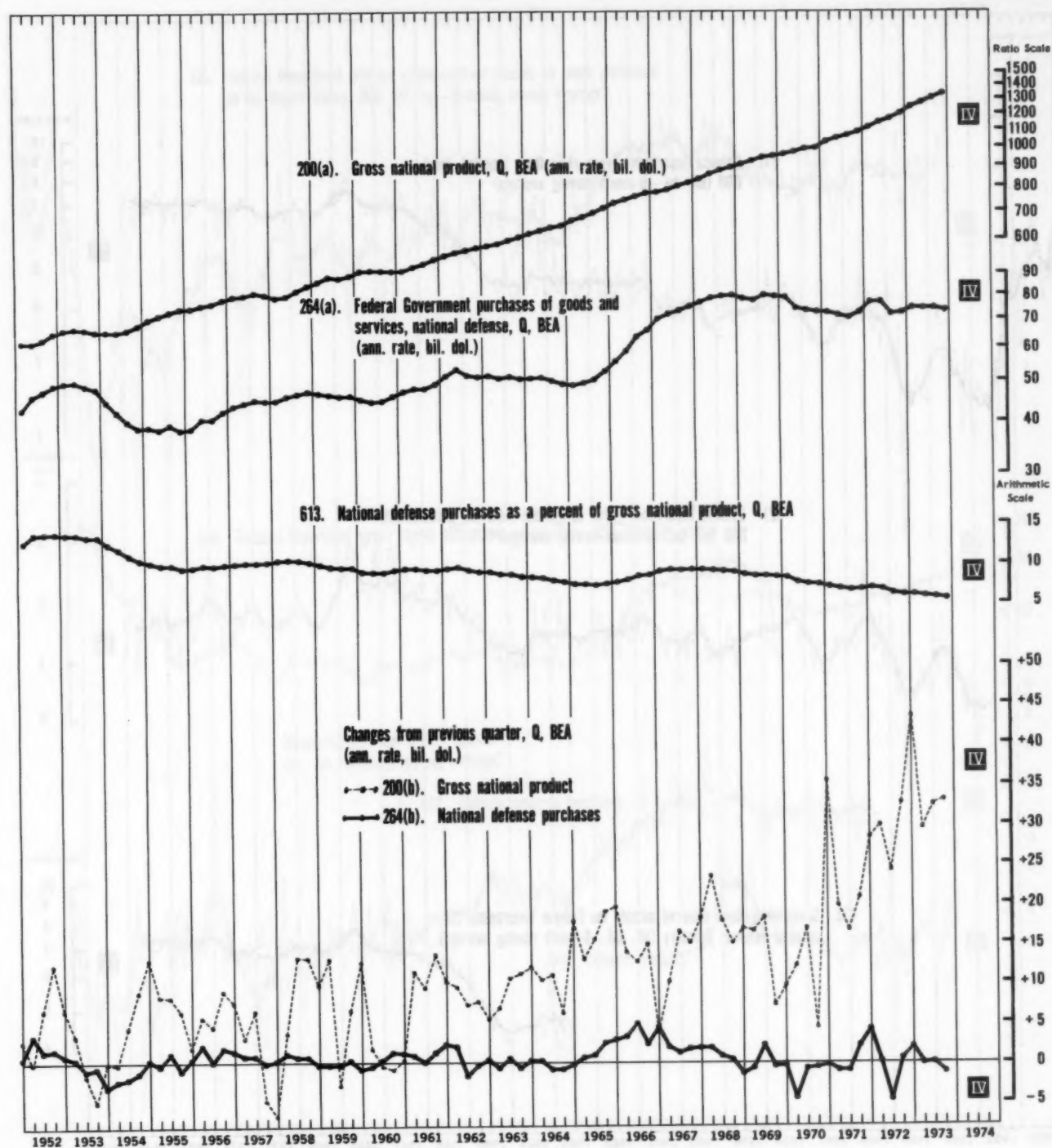
NA = not available.

²Differences rather than percent changes are shown for this series.

CHART

1

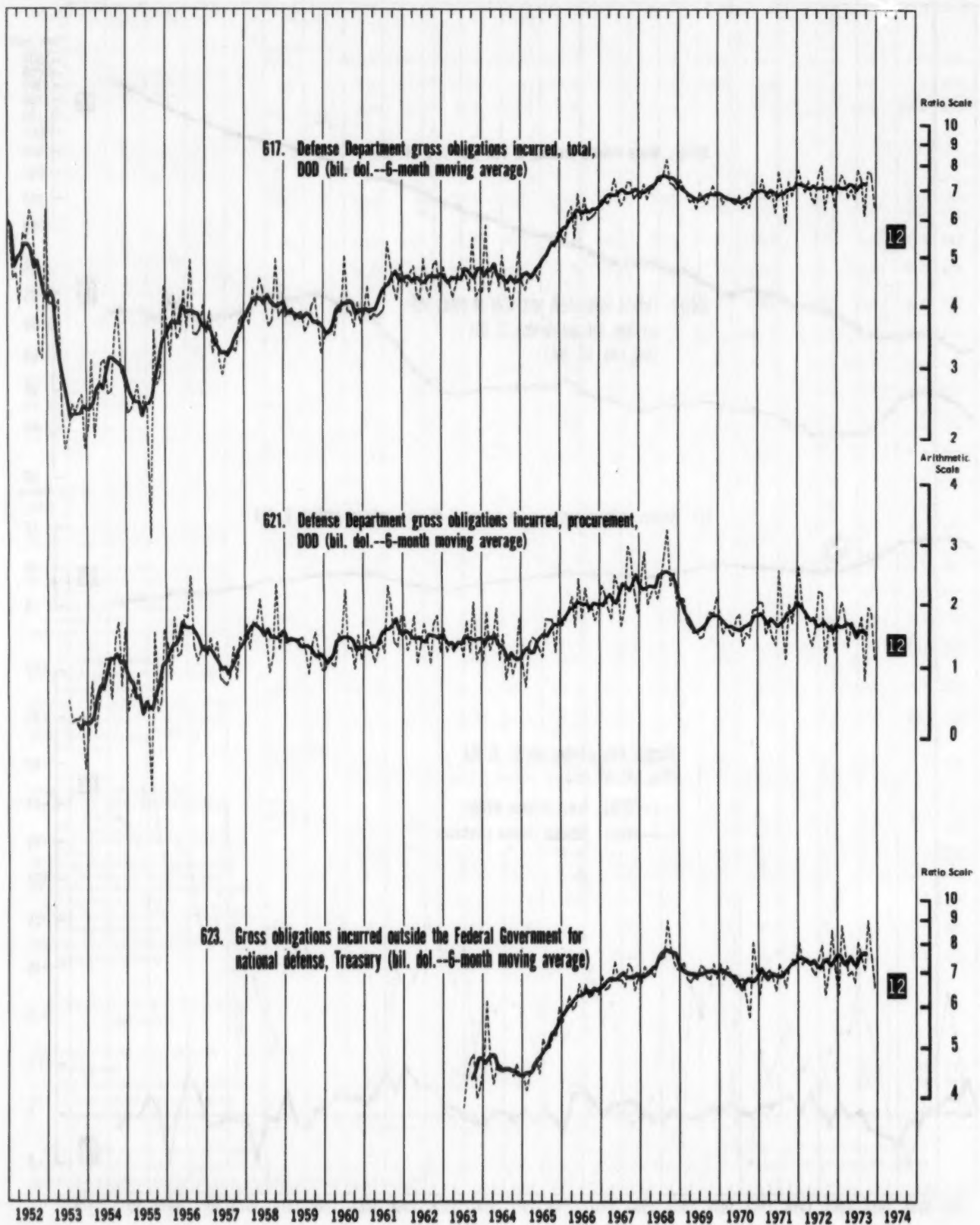
Gross National Product and National Defense Purchases



Current data for these series are shown on page 14.

CHART
2

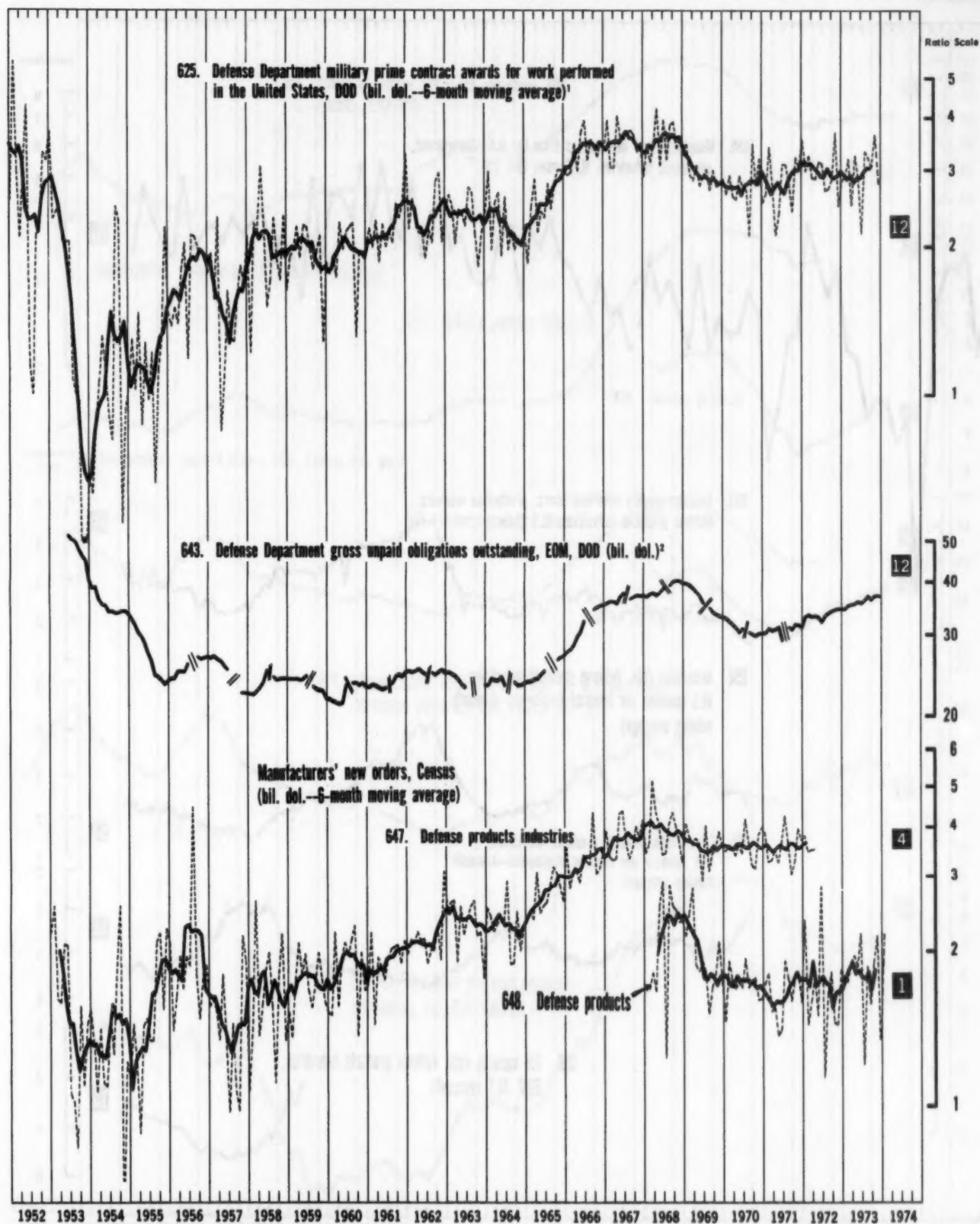
Advance Indicators of Defense Activity



Current data for these series are shown on pages 15 and 16.

CHART
2

Advance Indicators of Defense Activity--Continued



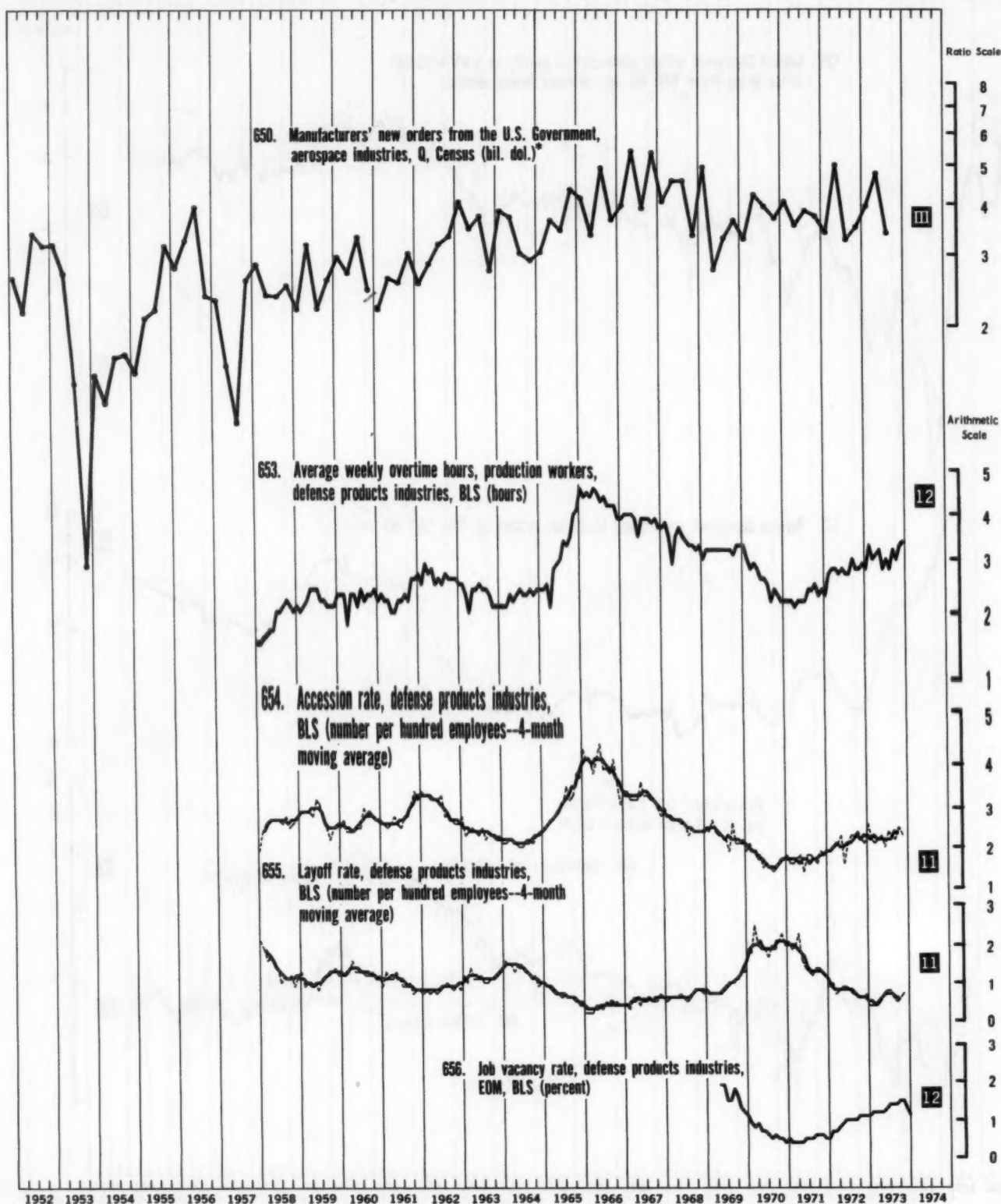
¹ Data prior to July 1955 exclude orders written to other Government agencies.

² Data for the following months not available: July of 1956-71; August of 1956-57 and 1963-66; September of 1957, 1963, and 1965; and October and November of 1963.

³ Contract awards for November 1953--\$265 million; December 1953--\$390 million. Current data for these series are shown on pages 16 and 20.



Advance Indicators of Defense Activity--Continued

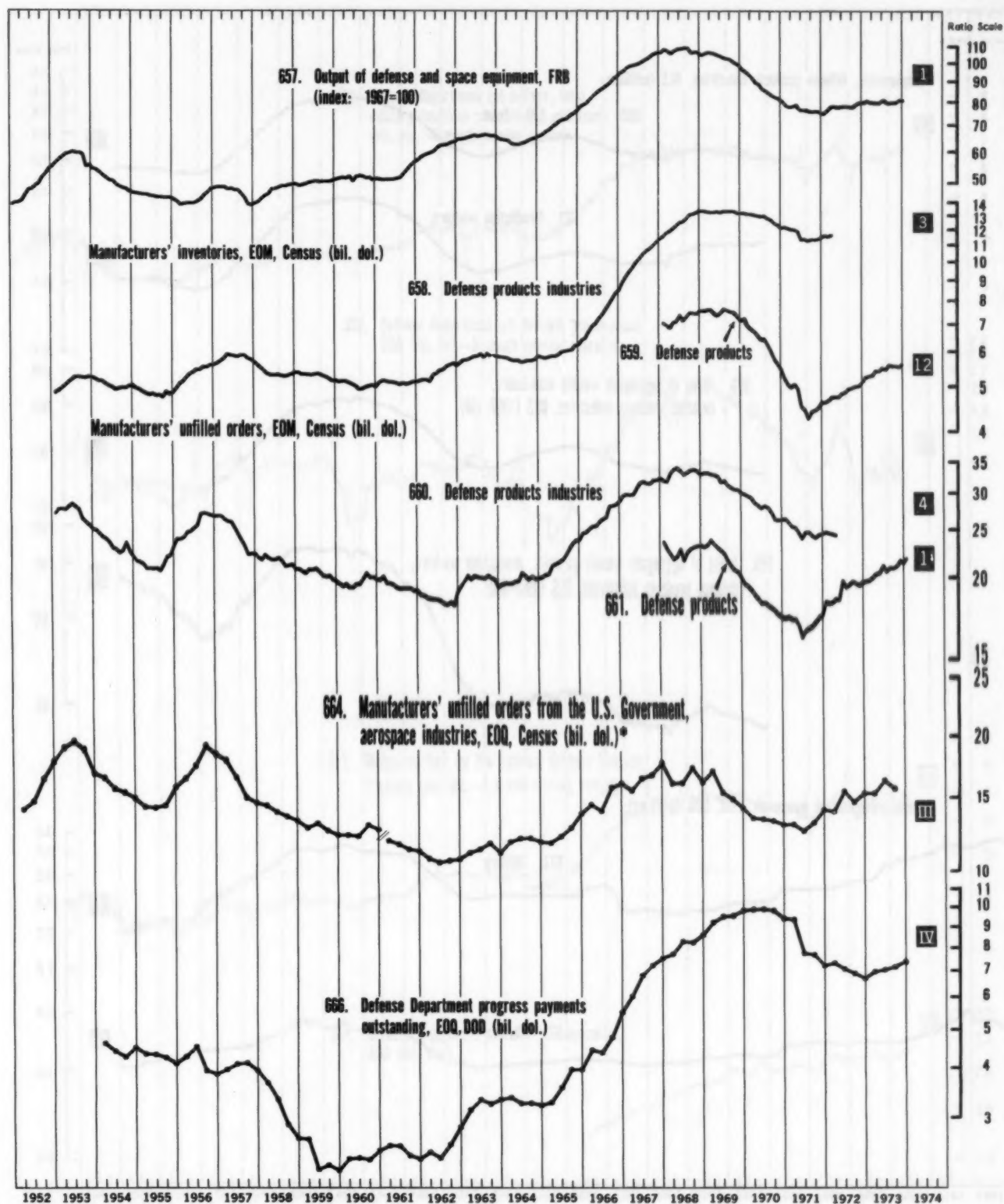


*Data prior to 1961 include orders from non-Government customers.
Current data for these series are shown on pages 20 and 21.

CHART

3

Intermediate and Final Indicators of Defense Activity

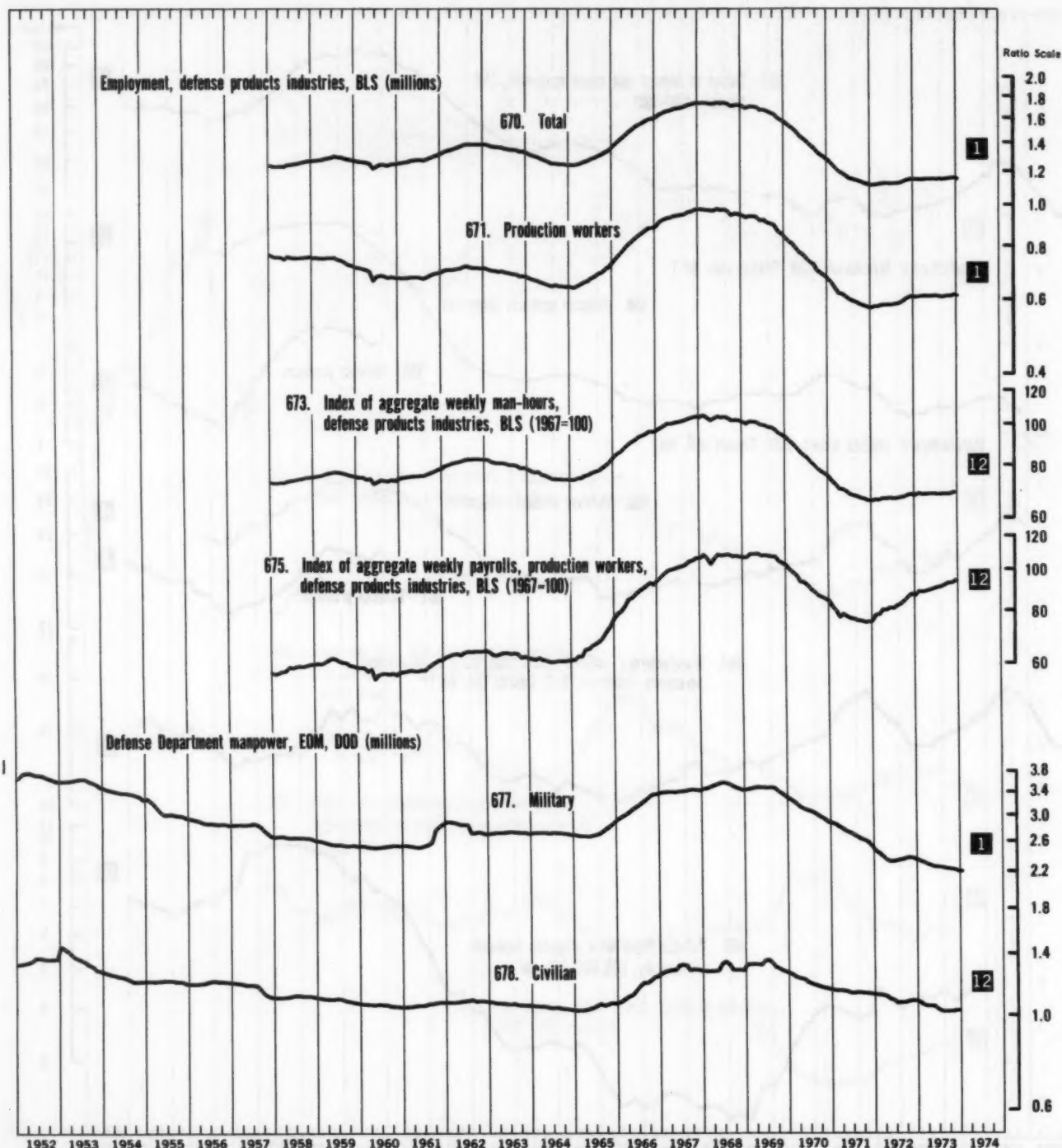


*Data prior to 1961 include orders from non-Government customers.
Current data for these series are shown on page 22.

CHART

3

Intermediate and Final Indicators of Defense Activity--Continued

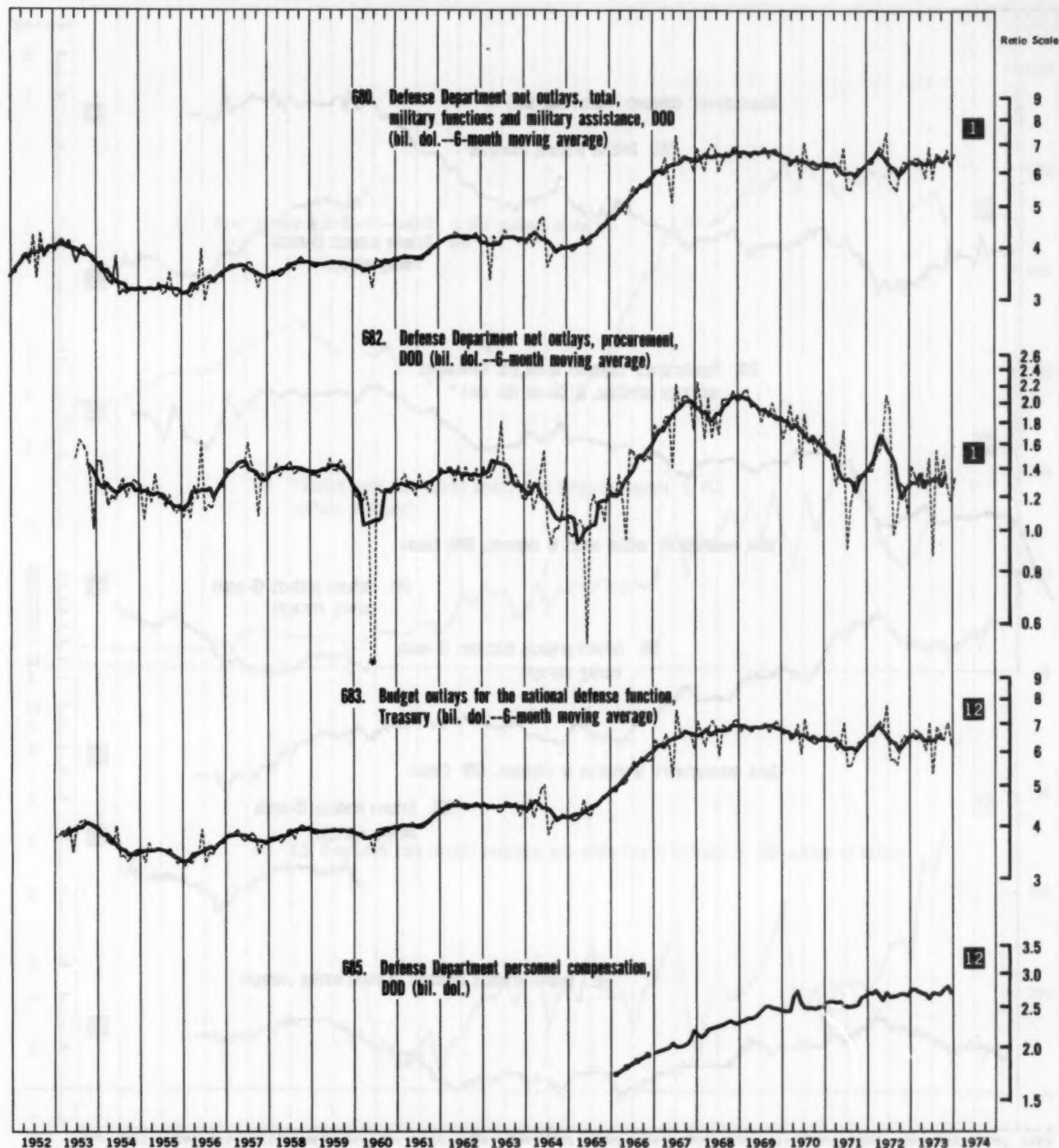


Current data for these series are shown on pages 22, 23, and 24.

CHART

3

Intermediate and Final Indicators of Defense Activity--Continued



*Net expenditures for procurement, June 1960--\$245 million.
Current data for these series are shown on pages 24 and 25.



Intermediate and Final Indicators of Defense Activity--Continued

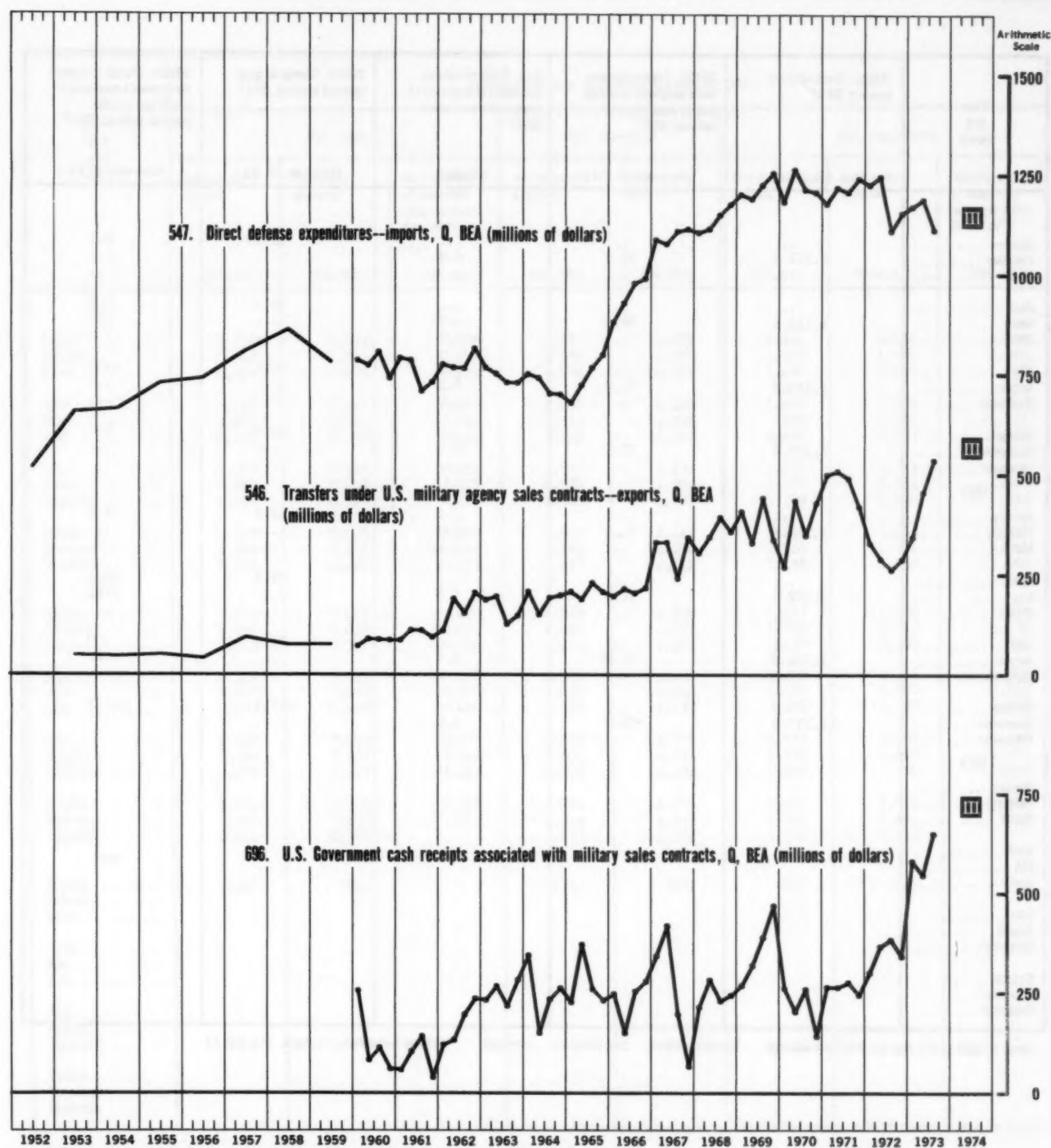


*Data prior to 1961 include shipments to non-Government customers.
Current data for these series are shown on page 26.

CHART

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Defense-Related Balance of Payments Components



Current data for these series are shown on page 27.

defense indicators

TABLE

1

Gross National Product and National Defense Purchases

Year and month	200(a). Gross national product, BEA*	264(a). Federal Government purchases of goods and services, national defense, BEA*	613. National defense purchases as a percent of gross national product, BEA*	200(b). Change in gross national product, BEA*	264(b). Change in Federal Government purchases of goods and services, national defense, BEA*
	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)	(Percent)	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)
1972					
January .....	...	...	...	28.3	4.1
February	1,112.5	76.5	6.9	...	...
March .....	...	...	...	...	...
April .....	...	...	...	29.9	0.1
May	1,142.4	76.6	6.7	...	...
June .....	...	...	...	...	...
July .....	...	...	...	24.1	-4.7
August	1,166.5	71.9	6.2	...	...
September .....	...	...	...	...	...
October .....	...	...	...	32.7	0.5
November	1,199.2	72.4	6.0	...	...
December .....	...	...	...	...	...
1973					
January .....	...	...	...	43.3	1.9
February	1,242.5	74.3	6.0	...	...
March .....	...	...	...	...	...
April .....	...	...	...	29.5	-0.1
May	1,272.0	74.2	5.8	...	...
June .....	...	...	...	...	...
July .....	...	...	...	32.5	0.0
August	1,304.5	74.2	5.7	...	...
September .....	...	...	...	...	...
October .....	...	...	...	r33.0	r-1.2
November	r1,337.5	r73.0	5.5		
December					
1974					
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

Note: All data on this page are seasonally adjusted. NA=not available; p=preliminary; r=revised. *Indicates series shown in charts. (See page 5.)

Advance Indicators of Defense Activity

TABLE

2

Year and month	Defense Department gross obligations incurred, DOD							
	617. Total			619. Operations		621. Procurement		
	Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data—6-month*	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data—6-month*
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1972								
January	7,772	7,825	7,228	4,623	4,653	2,534	2,634	2,040
February	6,542	7,239	7,190	3,990	4,381	1,667	1,994	1,960
March	6,445	6,935	7,179	4,170	4,371	1,470	1,817	1,898
April	6,455	7,122	7,073	4,437	4,429	1,278	1,518	1,815
May	5,813	6,724	7,024	4,084	4,268	993	1,328	1,744
June	9,429	6,595	7,154	5,110	4,311	2,975	1,597	1,776
July	7,769	7,528	7,051	4,933	4,473	1,310	2,213	1,651
August	7,810	8,018	7,043	4,559	4,404	1,767	2,184	1,667
September	6,899	6,317	7,118	4,345	4,498	1,582	1,068	1,725
October	7,178	7,076	7,089	4,647	4,441	1,757	1,610	1,666
November	6,489	7,172	7,024	4,193	4,478	1,556	1,680	1,591
December	6,066	6,422	6,955	4,027	4,441	1,456	1,240	1,568
1973								
January	7,414	7,141	7,129	4,688	4,556	1,815	1,766	1,688
February	6,691	7,603	7,074	4,097	4,671	1,785	2,042	1,638
March	6,716	7,361	7,054	4,174	4,404	1,435	1,787	1,645
April	6,342	6,743	7,098	4,522	4,462	1,028	1,316	1,703
May	5,997	7,052	7,208	4,195	4,324	1,171	1,720	1,669
June	9,327	6,690	7,180	5,122	4,435	2,871	1,587	1,629
July	8,180	7,799	6,975	5,334	4,734	1,019	1,563	1,468
August	7,505	7,438	7,142	4,634	4,534	1,393	1,800	1,574
September	6,289	6,127	7,241	4,201	4,424	1,168	820	1,595
October	8,074	7,746	7,192	5,024	4,775	2,105	1,951	1,518
November	6,917	7,646	(NA)	4,346	4,642	1,714	1,851	(NA)
December	6,041	6,396		4,133	4,558	1,321	1,125	
1974								
January	(NA)	(NA)		(NA)	(NA)	(NA)	(NA)	
February								
March								
April								
May								
June								
July								
August								
September								
October								
November								
December								

NA=not available; p=preliminary; r=revised. *Indicates series shown in charts. (See page 6.)

TABLE

2

Advance Indicators of Defense Activity--Continued

Year and month	623. Gross obligations incurred outside the Federal Government for national defense, Treasury		Defense Department military prime contract awards for work performed in the United States, DOD						
	Seasonally adjusted*	Moving average of seasonally adjusted data--6-month*	625. Total			626. Aircraft		627. Missile and space systems	
			Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data--6-month*	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1972									
January	8,070	7,462	3,210	3,531	3,059	634	...	359	...
February	7,267	7,490	2,499	2,971	3,138	469	1,915	410	1,554
March	7,467	7,431	2,871	3,233	3,078	726	...	473	...
April	7,362	7,364	2,167	2,866	3,096	471	...	257	...
May	7,090	7,269	2,204	2,848	3,023	367	2,236	209	1,100
June	6,930	7,382	5,574	3,126	2,973	1,586	...	481	...
July	7,500	7,195	3,415	3,093	2,885	955	...	681	...
August	7,944	7,136	2,593	2,673	2,881	529	1,991	326	1,164
September	6,345	7,381	2,815	2,704	3,020	523	...	481	...
October	7,010	7,413	3,008	2,840	2,908	395	...	516	...
November	8,558	7,220	2,997	3,682	2,864	427	1,505	491	1,279
December	7,121	7,358	2,611	2,459	2,898	612	...	359	...
1973									
January	6,340	7,578	2,578	2,824	2,978	728	...	377	...
February	8,775	7,565	2,418	2,879	2,916	328	1,921	297	1,412
March	7,667	7,314	2,841	3,185	2,842	721	...	504	...
April	6,929	p7,244	1,854	2,469	2,909	122	...	233	...
May	7,052	p7,533	2,489	3,237	2,793	866	1,997	129	880
June	p6,698	p7,317	5,122	2,861	2,866	1,243	...	349	...
July	8,079	p7,224	2,357	2,129	2,869	396	...	207	...
August	7,477	p7,567	3,224	3,313	2,962	611	1,811	921	1,229
September	7,110	p7,657	3,309	3,203	3,028	867	...	435	...
October	8,984	7,632	3,198	3,031	3,013	939	...	368	...
November	7,593	(NA)	2,967	3,632	(NA)	686	2,098	283	1,118
December	6,548		2,944	2,772		316		563	
1974									
January	(NA)		(NA)	(NA)		(NA)		(NA)	
February									
March									
April									
May									
June									
July									
August									
September									
October									
November									
December									

NA=not available; p=preliminary; r=revised. *Indicates series shown in charts. (See pages 6 and 7.)

Advance Indicators of Defense Activity--Continued

Year and month	Defense Department military prime contract awards for work performed in the United States, DOD--Continued						
	628. Ships, not seasonally adjusted	629. Weapons and ammunition		630. Electronic and communications equipment		631. Combat vehicles	
		Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1972							
January	851	257	...	307	...	13	...
February	132	250	801	324	1,083	7	42
March	165	225	...	347	...	13	...
April	59	235	...	248	...	37	...
May	89	225	762	272	959	17	103
June	194	448	...	731	...	72	...
July	160	41	...	234	...	6	...
August	370	82	476	215	931	18	141
September	311	166	...	298	...	140	...
October	276	292	...	302	...	15	...
November	266	269	620	401	937	40	104
December	148	236	...	228	...	33	...
1973							
January	84	207	...	214	...	14	...
February	378	226	683	215	939	11	47
March	85	195	...	420	...	11	...
April	82	150	...	237	...	12	...
May	78	184	755	351	959	15	67
June	139	566	...	654	...	54	...
July	337	21	...	131	...	50	...
August	220	81	361	354	990	24	86
September	203	114	...	313	...	27	...
October	161	105	...	248	...	116	...
November	465	106	313	392	904	21	226
December	588	192	...	261	...	56	...
1974							
January	(NA)	(NA)	...	(NA)	...	(NA)	...
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
December							

NA=not available; p=preliminary; r=revised.

defense indicators

TABLE

2

Advance Indicators of Defense Activity--Continued

Year and month	Defense Department military prime contract awards for work performed in the United States, DOD--Continued							
	632. Other hard goods		633. Soft goods		634. Construction		635. Services	
	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1972								
January	92	...	115	...	74	...	135	...
February	135	390	121	492	177	457	148	653
March	135	...	125	...	144	...	143	...
April	132	...	120	...	147	...	118	...
May	169	552	155	542	174	445	163	775
June	399	...	141	...	470	...	440	...
July	62	...	545	...	138	...	347	...
August	106	408	179	575	103	455	325	609
September	111	...	127	...	64	...	167	...
October	107	...	111	...	77	...	571	...
November	111	293	85	540	88	338	r132	r809
December	115	...	358	...	69	...	155	...
1973								
January	140	...	141	...	103	...	154	...
February	141	465	112	490	205	483	140	r687
March	130	...	102	...	131	...	r152	...
April	145	...	113	...	153	...	r195	...
May	128	497	97	482	151	451	137	r832
June	393	...	158	...	493	...	446	...
July	65	...	489	...	34	...	341	...
August	117	427	177	574	111	368	265	632
September	106	...	186	...	101	...	252	...
October	133	...	154	...	147	...	388	...
November	142	347	235	601	54	433	161	671
December	108	...	228	...	86	...	178	...
1974								
January	(NA)		(NA)		(NA)		(NA)	
February								
March								
April								
May								
June								
July								
August								
September								
October								
November								
December								

NA=not available; p=preliminary; r=revised.

Advance Indicators of Defense Activity--Continued

Year and month	Defense Department military prime contract awards for work performed in the United States, DOD--Continued					640. Defense Department military prime contract awards for work outside the United States, DOD	
	636. Contracts under \$10,000		637. Educational and nonprofit institutions		638. Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), not seasonally adjusted	Not seasonally adjusted	Seasonally adjusted
	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted			
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1972							
January	327	...	46	...	...	169	...
February	289	967	37	155	...	130	492
March	317	...	58	...	...	106	...
April	300	...	43	...	...	82	...
May	318	881	46	187	...	95	536
June	516	...	96	...	...	290	...
July	159	...	87	...	...	368	...
August	279	986	61	240	...	278	545
September	348	...	79	...	...	195	...
October	277	...	69	...	0	142	...
November	313	888	r114	r193	260	104	455
December	255	...	43	...	0	99	...
1973							
January	341	...	r41	...	34	156	...
February	320	1,019	45	r144	0	151	527
March	334	...	r43	...	13	125	...
April	356	...	r46	...	10	213	...
May	319	968	r35	r159	-1	83	645
June	551	...	76	...	0	264	...
July	225	...	61	...	0	368	...
August	210	1,014	123	287	10	244	497
September	390	...	86	...	229	159	...
October	319	...	85	...	35	194	...
November	335	1,040	87	171	0	240	821
December	326	...	29	...	13	186	...
1974							
January	(NA)	...	(NA)	...	(NA)	(NA)	...
February .....	...	...	...	...	...	...	...
March .....	...	...	...	...	...	...	...
April .....	...	...	...	...	...	...	...
May .....	...	...	...	...	...	...	...
June .....	...	...	...	...	...	...	...
July .....	...	...	...	...	...	...	...
August .....	...	...	...	...	...	...	...
September .....	...	...	...	...	...	...	...
October .....	...	...	...	...	...	...	...
November .....	...	...	...	...	...	...	...
December .....	...	...	...	...	...	...	...

NA=not available; p=preliminary; r=revised.

defense indicators

TABLE

2

Advance Indicators of Defense Activity--Continued

Year and month	Defense Department gross unpaid obligations outstanding, DOD						648. Manufacturers' new orders, defense products, Census		650. Manufac- turers' new orders from the U.S. Govern- ment, aerospace industries, Census, seasonally adjusted*
	643. Total		644. Operations		645. Procurement				
	Not seasonally adjusted	Seasonally adjusted*	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data- 6-month*	
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	
1972									
January	33,734	32,879	5,303	4,998	21,702	21,131	2,339	1,747	...
February	33,554	33,189	5,021	5,011	21,877	21,364	1,426	1,749	3,399
March	32,480	32,841	4,635	4,864	21,637	21,680	1,582	1,695	...
April	32,152	33,044	4,439	4,727	21,360	21,774	1,763	1,902	...
May	30,675	32,737	3,891	4,323	20,672	21,578	1,486	1,700	4,992
June	31,347	31,954	4,211	4,700	20,982	20,692	2,818	1,734	...
July	32,546	32,975	4,739	4,881	20,570	20,820	1,123	1,771	...
August	33,684	33,450	5,043	4,807	20,813	21,347	1,634	1,717	3,266
September	34,563	33,852	5,349	5,104	21,237	21,280	1,803	1,707	...
October	35,251	34,125	5,845	5,242	21,645	21,537	1,437	1,541	...
November	35,009	34,289	5,671	5,335	21,836	21,663	1,425	1,647	3,505
December	34,601	34,225	5,438	5,433	22,023	21,634	1,824	1,662	...
1973									
January	35,171	34,246	5,741	5,406	22,326	21,718	1,760	1,677	...
February	35,287	34,869	5,589	5,578	22,721	22,145	1,725	1,762	3,943
March	34,766	35,117	5,273	5,539	22,469	22,491	1,889	1,833	...
April	34,297	35,213	5,424	5,776	22,044	22,448	1,952	1,892	...
May	33,409	35,693	5,227	5,808	21,753	22,707	1,849	1,798	4,749
June	34,621	35,328	5,301	5,916	22,806	22,513	2,175	1,820	...
July	e35,500	e35,968	e6,200	e6,385	e22,100	e22,391	1,199	1,766	...
August	37,069	36,811	6,754	6,439	22,432	23,031	1,855	1,756	p3,388
September	36,829	36,107	6,719	6,417	22,195	22,284	1,565	1,807	...
October	38,039	36,859	7,519	6,737	22,679	22,589	1,893	r1,668	...
November	37,680	36,905	7,193	6,767	22,877	22,695	2,154	p1,831	(NA)
December	37,244	36,839	7,064	7,057	22,932	22,527	r1,343		
1974									
January	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	p2,174		
February									
March									
April									
May									
June									
July									
August									
September									
October									
November									
December									

NA=not available; p=preliminary; r=revised. *Indicates series shown in charts. (See pages 7 and 8.)

Advance Indicators of Defense Activity--Continued

Year and month	653. Average weekly overtime hours, production workers, defense products industries, BLS		654. Accession rate, defense products industries, BLS			655. Layoff rate, defense products industries, BLS			656. Job vacancy rate, defense products industries, BLS, not seasonally adjusted*
	Not seasonally adjusted	Seasonally adjusted*	Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data--4-month*	Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data--4-month*	
	(Hours)	(Hours)	(Per 100 employees)	(Per 100 employees)	(Per 100 employees)	(Per 100 employees)	(Per 100 employees)	(Per 100 employees)	(Percent)
1972									
January	2.4	2.3	1.8	1.9	1.9	1.2	0.9	1.1	0.7
February	2.5	2.7	1.7	1.9	1.9	1.2	1.0	0.9	0.7
March	2.7	2.8	1.9	2.0	2.0	1.0	0.7	0.8	0.8
April	2.5	2.8	1.9	2.1	2.1	0.9	0.8	0.8	0.9
May	2.4	2.7	2.2	2.3	2.0	0.7	0.9	0.8	1.0
June	2.8	2.8	2.5	1.6	2.0	0.6	0.9	0.8	1.0
July	2.4	2.7	2.2	2.1	2.1	0.6	0.8	0.8	1.0
August	2.7	2.7	2.6	2.3	2.1	0.6	0.7	0.8	1.0
September	3.2	3.0	2.5	2.3	2.2	0.6	0.7	0.7	1.1
October	3.0	2.8	2.4	2.4	2.3	0.6	0.6	0.6	1.1
November	3.1	2.8	1.9	2.2	2.2	0.6	0.6	0.6	1.1
December	3.4	2.9	1.5	2.1	2.3	0.5	0.7	0.6	1.1
1973									
January	2.9	2.8	2.5	2.6	2.3	0.8	0.4	0.5	1.2
February	3.1	3.3	2.0	2.2	2.2	0.7	0.4	0.5	1.2
March	2.9	3.0	2.0	2.1	2.3	0.7	0.4	0.4	1.2
April	2.8	3.1	2.0	2.2	2.2	0.6	0.5	0.5	1.2
May	2.9	3.2	2.2	2.3	2.2	0.5	0.7	0.6	1.3
June	2.8	2.8	2.9	2.0	2.2	0.5	0.8	0.7	1.4
July	2.7	3.0	2.5	2.4	2.2	0.6	0.8	0.7	1.4
August	2.8	2.8	2.6	2.3	2.2	0.5	0.6	0.7	1.4
September	3.4	3.2	2.4	2.2	2.4	0.4	0.5	0.6	1.5
October	3.2	3.0	2.5	2.5	2.3	0.6	0.6	0.6	1.5
November	r3.6	r3.3	2.0	2.3	(NA)	0.7	0.7	(NA)	1.3
December	p3.9	p3.4	(NA)	(NA)		(NA)	(NA)		1.1
1974									
January	(NA)	(NA)							(NA)
February									
March									
April									
May									
June									
July									
August									
September									
October									
November									
December									

NA=not available; p=preliminary; r=revised. *Indicates series shown in charts. (See page 8.)

defense indicators

TABLE
3

Intermediate and Final Indicators of Defense Activity

Year and month	657. Output of defense and space equipment, FRB, seasonally adjusted*	659. Manufacturers' inventories, defense products, Census, seasonally adjusted*	661. Manufacturers' unfilled orders, defense products, Census, seasonally adjusted*	664. Manufacturers' unfilled orders from the U.S. Government, aerospace industries, Census, seasonally adjusted*	666. Defense Department progress payments outstanding, DOD, not seasonally adjusted*	670. Employment in defense products industries, total, BLS	
	(Index: 1967=100)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	Not seasonally adjusted	Seasonally adjusted*
1972							
January	74.8	4,594	18,080	...	...	1,108	1,105
February	76.0	4,627	17,982	...	...	1,109	1,108
March	77.6	4,706	18,047	13,871	7,297	1,108	1,109
April	78.1	4,720	18,288	...	...	1,109	1,116
May	77.7	4,711	18,243	...	...	1,109	1,117
June	78.1	4,802	19,607	15,441	7,043	1,113	1,116
July	78.3	4,831	19,174	...	...	1,113	1,115
August	78.1	4,911	19,320	...	...	1,114	1,117
September	77.6	4,937	19,572	14,628	6,866	1,125	1,119
October	77.9	4,978	19,436	...	...	1,131	1,128
November	79.6	4,988	19,289	...	...	1,142	1,137
December	80.1	5,087	19,553	15,322	6,668	1,146	1,143
1973							
January	79.8	5,210	19,615	...	...	1,145	1,141
February	80.6	5,248	19,710	...	...	1,143	1,142
March	80.1	5,266	19,934	15,303	6,942	1,139	1,140
April	80.0	5,384	20,246	...	...	1,137	1,144
May	79.7	5,384	20,350	...	...	1,135	1,143
June	80.1	5,477	20,944	16,322	7,026	1,142	1,145
July	81.1	5,434	20,470	...	...	1,141	1,144
August	79.7	5,555	20,772	...	...	1,142	1,146
September	79.8	5,528	20,729	p15,695	7,139	1,148	1,143
October	r80.0	5,531	20,912	...	...	1,150	1,147
November	r80.0	5,508	21,457	...	...	1,154	1,150
December	r80.9	5,615	r21,252	(NA)	7,385	r1,157	r1,154
1974							
January	p80.6	(NA)	p21,791			p1,149	p1,146
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
December							

NA=not available; p=preliminary; r=revised. *Indicates series shown in charts. (See pages 9 and 10.)

Intermediate and Final Indicators of Defense Activity--Continued

Year and month	671. Employment in defense products industries, production workers, BLS		673. Index of aggregate weekly man-hours, defense products industries, BLS		675. Index of aggregate weekly payrolls, production workers, defense products industries, BLS	
	Not seasonally adjusted	Seasonally adjusted*	Not seasonally adjusted	Seasonally adjusted*	Not seasonally adjusted	Seasonally adjusted*
	(Thous.)	(Thous.)	(1967=100)	(1967=100)	(1967=100)	(1967=100)
1972						
January	570	567	65.7	65.5	75.8	75.2
February	573	572	65.8	66.0	77.5	77.9
March	571	572	65.9	65.9	78.2	78.2
April	572	577	65.9	66.4	78.7	80.1
May	571	577	65.8	66.4	78.7	79.9
June	575	578	66.3	66.6	79.9	81.0
July	575	578	65.7	66.3	78.5	80.7
August	578	581	66.1	66.5	80.8	81.9
September	587	582	67.1	66.8	83.7	82.8
October	592	589	67.4	67.1	84.6	84.1
November	604	599	68.4	67.7	88.0	86.0
December	608	604	68.9	67.9	90.6	87.2
1973						
January	606	602	67.8	67.6	87.2	86.6
February	606	604	68.1	68.3	88.2	88.6
March	603	605	67.9	67.9	88.3	88.3
April	601	606	67.4	68.0	87.2	88.7
May	599	605	67.6	68.2	88.0	89.3
June	603	606	67.9	68.2	88.7	89.8
July	603	607	67.4	68.1	88.1	90.5
August	601	604	67.6	68.0	89.5	90.7
September	608	603	68.6	68.2	92.6	91.6
October	610	607	68.4	68.1	93.0	92.5
November	611	606	69.1	68.4	94.9	92.7
December	r615	r611	p69.7	p68.7	p98.0	p94.3
1974						
January	p610	p607	(NA)	(NA)	(NA)	(NA)
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						

NA=not available; p=preliminary; r=revised. *Indicates series shown in charts. (See page 10.)

defense indicators

TABLE
3

Intermediate and Final Indicators of Defense Activity--Continued

Year and month	Defense Department manpower, DOD		Defense Department net outlays, DOD				
	677. Military, not seasonally adjusted*	678. Civilian, not seasonally adjusted*	680. Total, military functions and military assistance			681. Operations	
			Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data--6-month*	Not seasonally adjusted	Seasonally adjusted
	(Thous.)	(Thous.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1972							
January	2,462	1,119	5,973	6,285	6,251	3,971	4,199
February	2,426	1,117	6,128	6,285	6,379	4,013	4,168
March	2,385	1,112	6,944	6,527	6,476	4,307	4,286
April	2,341	1,107	6,539	6,876	6,681	4,294	4,353
May	2,319	1,090	6,911	6,682	6,583	4,535	4,459
June	2,323	1,083	8,769	7,431	6,457	4,271	3,468
July	2,332	1,068	4,987	5,695	6,272	3,972	4,489
August	2,344	1,073	5,679	5,530	6,146	3,928	3,824
September	2,356	1,071	5,212	5,416	6,091	3,805	3,886
October	2,371	1,081	6,107	6,120	5,892	3,925	4,017
November	2,370	1,083	6,313	6,355	5,989	4,084	4,082
December	2,348	1,082	6,063	6,233	6,144	4,012	4,089
1973							
January	2,334	1,073	6,388	6,282	6,319	4,119	4,145
February	2,314	1,057	6,054	6,458	6,333	3,988	4,223
March	2,291	1,051	6,736	6,464	6,240	4,217	4,307
April	2,274	1,051	6,222	6,206	6,348	4,087	3,969
May	2,256	1,051	6,213	5,800	6,262	4,033	3,930
June	2,253	1,031	7,854	6,878	6,290	4,537	3,846
July	2,251	1,019	5,005	5,769	6,304	3,669	3,992
August	2,237	1,022	6,649	6,625	6,324	4,279	4,189
September	2,232	1,019	5,967	6,543	6,488	4,027	4,302
October	2,227	1,022	6,527	6,330	6,372	4,105	4,089
November	2,218	1,026	6,766	6,785	p6,511	4,359	4,418
December	2,202	1,026	r5,953	r6,178		r4,066	r4,226
1974							
January	p2,202	(NA)	p6,717	p6,605		p4,374	p4,402
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
December							

NA=not available; p=preliminary; r=revised. *Indicates series shown in charts. (See pages 10 and 11.)

Intermediate and Final Indicators of Defense Activity--Continued

Year and month	Defense Department net outlays, DOD--Continued			683. Budget outlays for the national defense function, Treasury		685. Defense Department personnel compensation, DOD	
	682. Procurement			Seasonally adjusted*	Moving average of seasonally adjusted data--6-month*	Not seasonally adjusted	Seasonally adjusted*
	Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data--6-month*				
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1972							
January	1,276	1,379	1,376	6,542	6,494	2,713	2,697
February	1,367	1,372	1,409	6,538	6,623	2,681	2,677
March	1,666	1,485	1,459	6,767	6,712	2,778	2,731
April	1,456	1,533	1,583	7,078	6,916	2,625	2,649
May	1,621	1,651	1,673	6,865	6,783	2,638	2,583
June	2,390	2,080	1,606	7,707	6,648	2,711	2,698
July	1,675	1,917	1,538	5,743	6,449	2,651	2,633
August	975	972	1,496	5,731	6,328	2,693	2,643
September	1,072	1,073	1,432	5,569	6,278	2,610	2,652
October	1,306	1,286	1,268	6,351	6,041	2,636	2,681
November	1,254	1,262	1,184	6,565	6,177	2,658	2,675
December	1,084	1,096	1,245	6,289	6,347	2,609	2,654
1973							
January	1,355	1,412	1,277	6,556	6,527	2,811	2,745
February	1,243	1,341	1,290	6,754	6,544	2,666	2,751
March	1,439	1,264	1,288	6,648	6,456	2,728	2,714
April	1,287	1,364	1,352	6,452	6,574	2,675	2,688
May	1,315	1,254	1,262	6,034	6,370	2,736	2,677
June	1,649	1,478	1,296	6,999	6,386	2,615	2,612
July	863	870	1,302	5,330	6,389	2,712	2,693
August	1,450	1,543	1,320	6,850	6,379	2,735	2,684
September	1,239	1,305	1,322	6,669	6,544	2,615	2,673
October	1,487	1,468	1,271	6,394	6,416	2,732	2,738
November	1,268	1,271	p1,346	7,020	(NA)	r2,765	r2,782
December	1,124	1,167		6,232		p2,637	p2,682
1974							
January	p1,270	p1,324		(NA)		(NA)	(NA)
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
December							

NA=not available; p=preliminary; r=revised. *Indicates series shown in charts. (See page 11.)

defense indicators

TABLE

3

Intermediate and Final Indicators of Defense Activity--Continued

Year and month	688. Manufacturers' shipments, defense products, Census		689. Manufacturers' shipments to the U.S. Government, aerospace industries, Census, seasonally adjusted*	691. Ratio, manufacturers' unfilled orders to shipments, defense products, Census		693. Ratio, manufacturers' inventories to shipments, defense products, Census	
	Seasonally adjusted*	Moving average of seasonally adjusted data--5-month*		Seasonally adjusted*	Moving average of seasonally adjusted data--6-month*	Seasonally adjusted*	Moving average of seasonally adjusted data--6-month*
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Ratio)	(Ratio)	(Ratio)	(Ratio)
1972							
January	1,478	1,500	...	12.2	11.5	3.1	3.0
February	1,524	1,496	3,192	11.8	11.7	3.0	3.1
March	1,517	1,514	...	11.9	11.8	3.1	3.1
April	1,522	1,510	...	12.0	12.1	3.1	3.1
May	1,531	1,516	3,288	11.9	12.1	3.1	3.1
June	1,454	1,510	...	13.5	12.3	3.3	3.2
July	1,556	1,516	...	12.3	12.5	3.1	3.2
August	1,488	1,524	3,852	13.0	12.6	3.3	3.2
September	1,551	1,548	...	12.6	12.7	3.2	3.2
October	1,573	1,549	...	12.4	12.5	3.2	3.3
November	1,572	1,591	3,178	12.3	12.4	3.2	3.3
December	1,560	1,607	...	12.5	12.2	3.3	3.2
1973							
January	1,698	1,625	...	11.6	12.1	3.1	3.2
February	1,630	1,639	3,578	12.1	12.1	3.2	3.3
March	1,665	1,676	...	12.0	12.0	3.2	3.2
April	1,640	1,653	...	12.4	12.2	3.3	3.2
May	1,746	1,661	3,712	11.7	12.3	3.1	3.2
June	1,583	1,639	...	13.2	12.5	3.5	3.3
July	1,673	1,632	...	12.2	12.6	3.2	3.4
August	1,552	1,625	p3,733	13.4	12.6	3.6	3.3
September	1,607	1,630	...	12.9	12.9	3.4	3.4
October	1,710	r1,605	...	12.2	r13.0	3.2	3.4
November	1,607	p1,622	(NA)	13.4	p13.2	3.4	(NA)
December	r1,547			r13.7		3.6	
1974							
January	p1,637			p13.3		(NA)	
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
December							

NA=not available; p=preliminary; r=revised. *Indicates series shown in charts. (See page 12.)

TABLE

4

Defense-Related Balance of Payments Components

Year and month	546. Transfers under U.S. military agency sales contracts (exports), BEA		547. Direct defense expenditures (imports), BEA, not seasonally adjusted*	696. U.S. Government cash receipts associated with military sales contracts, BEA	
	Not seasonally adjusted	Seasonally adjusted*		Not seasonally adjusted	Seasonally adjusted*
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1972					
January .....	...	...	...	...	...
February	311	328	1,222	237	300
March .....	...	...	...	...	...
April .....	...	...	...	...	...
May	327	288	1,242	374	366
June .....	...	...	...	...	...
July .....	...	...	...	...	...
August	228	262	1,108	325	383
September .....	...	...	...	...	...
October .....	...	...	...	...	...
November	299	287	1,151	455	342
December .....	...	...	...	...	...
1973					
January .....	...	...	...	...	...
February	325	343	1,168	517	580
March .....	...	...	...	...	...
April .....	...	...	...	...	...
May	514	455	1,185	553	545
June .....	...	...	...	...	...
July .....	...	...	...	...	...
August	p466	p534	pl,110	p591	p649
September .....	...	...	...	...	...
October .....	...	...	...	...	...
November	(NA)	(NA)	(NA)	(NA)	(NA)
December .....	...	...	...	...	...
1974					
January .....	...	...	...	...	...
February .....	...	...	...	...	...
March .....	...	...	...	...	...
April .....	...	...	...	...	...
May .....	...	...	...	...	...
June .....	...	...	...	...	...
July .....	...	...	...	...	...
August .....	...	...	...	...	...
September .....	...	...	...	...	...
October .....	...	...	...	...	...
November .....	...	...	...	...	...
December .....	...	...	...	...	...

NA=not available; p=preliminary; r=revised. *Indicates series shown in charts. (See page 13.)

Appendix A. SEASONAL ADJUSTMENT FACTORS

Series title	1973											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
MONTHLY SERIES												
Defense Department gross obligations incurred:												
617. Total ¹	103.8	88.0	91.2	94.1	85.0	139.4	104.9	100.9	102.6	104.2	90.5	94.5
619. Operations ¹	102.9	87.7	94.8	101.3	97.0	115.5	112.7	102.2	94.9	105.2	93.6	90.7
621. Procurement	102.8	87.4	80.3	78.1	68.1	180.9	65.2	77.4	142.5	107.9	92.6	117.4
623. Gross obligations incurred outside the Federal Government for national defense ¹	106.2	86.8	93.7	92.8	90.3	122.4	105.3	105.8	97.4	106.4	97.9	94.0
625. Defense Department military prime contract awards for work performed in the United States	91.3	84.0	89.2	75.1	76.9	179.0	110.7	97.3	103.3	105.5	81.7	106.2
Defense Department gross unpaid obligations outstanding: ²												
643. Total	102.7	101.2	99.0	97.4	93.6	98.0	98.7	100.7	102.0	103.2	102.1	101.1
644. Operations	106.2	100.2	95.2	93.9	90.0	89.6	97.1	104.9	104.7	111.6	106.3	100.1
645. Procurement	102.8	102.6	99.9	98.2	95.8	101.3	98.7	99.6	99.6	100.4	100.8	101.8
648. Manufacturers' new orders, defense products ³	93.8	103.6	89.6	91.4	69.7	90.5	181.1	90.5	108.6	107.8	86.3	117.1
653. Average weekly overtime hours, production workers, defense products industries ⁴	.1	-.2	-.1	-.3	-.3	.0	-.3	.0	.2	.2	.3	.5
654. Accession rate, defense products industries ⁴	-.1	-.2	-.1	-.2	-.1	.9	.1	.3	.2	.0	-.3	-.6
655. Layoff rate, defense products industries ⁴	.4	.3	.3	.1	-.2	-.3	-.2	-.1	-.1	.0	.0	-.2
657. Output of defense and space equipment ³	100.7	99.9	100.4	99.4	99.9	100.8	98.7	99.0	100.0	100.1	100.9	101.5
659. Manufacturers' inventories, defense products ³	98.7	100.1	101.5	101.8	101.9	100.5	100.3	99.3	98.2	100.1	99.6	98.6
661. Manufacturers' unfilled orders, defense products ³	101.0	101.6	100.7	99.8	97.5	95.8	100.8	100.0	100.6	101.3	100.0	100.8
Employment in defense products industries:												
670. Total	100.3	100.1	99.9	99.4	99.3	99.7	99.8	99.7	100.5	100.3	100.4	100.3
671. Production workers	100.5	100.2	99.8	99.2	99.0	99.5	99.4	99.5	100.8	100.5	100.9	100.6
673. Index of aggregate weekly man-hours, defense products industries	100.3	99.7	100.0	99.2	99.1	99.6	99.0	99.4	100.5	100.4	101.0	101.5
675. Index of aggregate weekly payrolls, production workers, defense products industries	100.8	99.5	100.0	98.3	98.5	98.7	97.3	98.7	101.1	100.6	102.3	103.9
Defense Department net outlays:												
680. Total, military functions and military assistance ¹	101.7	93.7	104.2	100.2	107.1	114.2	86.8	100.4	91.2	103.1	99.7	96.4
681. Operations ¹	99.4	94.4	97.9	103.0	102.6	118.0	91.9	102.1	93.6	100.4	98.7	96.2
682. Procurement ¹	96.0	92.7	113.9	94.4	104.8	111.6	99.2	94.0	95.0	101.3	99.7	96.3
683. Budget outlays for the national defense function ¹	101.2	92.8	104.7	99.4	106.1	114.5	91.5	98.9	91.4	103.3	98.3	97.6
685. Defense Department personnel compensation ¹	102.4	96.9	100.5	99.5	102.2	100.1	100.7	101.9	97.8	99.8	99.4	98.3
688. Manufacturers' shipments, defense products ³	88.0	96.8	99.1	100.4	98.8	106.2	95.8	100.3	102.8	98.6	102.5	109.9
QUARTERLY SERIES												
	IQ			IIQ			IIIQ			IVQ		
200. Gross national product ³	95.6			100.9			98.8			104.4		
264. Fed. Govt. purchases of goods and services, national defense ³	97.3			103.4			97.4			101.1		
546. Transfers under U.S. military agency sales contracts-exports ⁵	-17			39			-34			12		
Defense Department military prime contract awards:												
626. Aircraft	92.5			111.7			103.5			92.5		
627. Missile and space systems	83.4			80.8			127.2			108.6		
629. Weapons and ammunition	92.0			119.2			59.9			128.8		
630. Electronic and communications equipment	90.4			129.5			80.6			99.7		
631. Combat vehicles	77.0			121.1			117.1			85.4		
632. Other hard goods	88.3			134.0			67.5			110.4		
633. Soft goods	72.5			76.4			148.5			102.6		
634. Construction	90.8			176.6			66.9			66.3		
635. Services	64.9			93.5			135.7			108.3		
636. Under \$10,000	97.6			126.7			81.4			94.2		
637. Educational and nonprofit institutions	89.8			98.7			94.2			117.8		
640. Outside U.S.	81.9			86.8			155.2			75.5		
Aerospace industries:												
650. Manufacturers' new orders from the U.S. Government	90.5			78.1			131.3			101.4		
664. Manufacturers' unfilled orders from the U.S. Government	101.2			94.8			104.0			100.0		
689. Manufacturers' shipments to the U.S. Government	95.1			100.3			96.4			108.4		
696. U.S. Govt. cash receipts associated with military sales contracts ⁴	-63			8			-58			113		

NOTE: The seasonal adjustment factors presented in this table were computed using the techniques described in the Bureau of the Census Technical Paper No. 15, *The X-11 Variant of the Census Method II Seasonal Adjustment Program*.

Monthly data for Defense Department military prime contract awards by commodity category (series 626 to 640) have not been adjusted for seasonal variation. The series on direct defense expenditures-imports (series 547), Defense Department progress payments outstanding (series 666), and Defense Department manpower (series 677 and 678) contain no measurable seasonal variation. The series on job vacancy rate, defense products industries (series 656) contains too few observations to be seasonally adjusted.

¹Factors are products of seasonal and trading-day factors.

²Prior to 1972, data for gross unpaid obligations outstanding are not available for a number of months but these gaps were filled with averages of preceding and following months for purposes of estimating seasonal variation.

³These series have been adjusted by the source agencies. The factors shown here are implicit seasonal factors for the calendar year 1972 and are derived by dividing the seasonally unadjusted data by the seasonally adjusted data.

⁴These series have been seasonally adjusted using the additive version of the seasonal adjustment program. Seasonally adjusted data are derived by subtracting the adjustment factor from the unadjusted data. Seasonally adjusted data for other series are derived by dividing the seasonal factors into the unadjusted data.

⁵This series is the total of component series which have been adjusted separately by the source agency. The factors shown here are implicit seasonal factors for the calendar year 1972 and are derived by subtracting the seasonally adjusted data from the seasonally unadjusted data.

Appendix B. AVERAGE CHANGES AND RELATED MEASURES OF VARIABILITY

Part 1. Monthly Series

Series title	Period covered	O	CI	I	C	I/C	MCD	Average duration of run (ADR)	
								CI	MCD
Defense Department gross obligations incurred:									
617. Total	Jan. '57-Mar. '72	19.03	7.81	7.70	0.81	9.47	6	1.57	2.46
619. Operations	July '59-Mar. '72	8.03	2.72	2.61	.70	3.70	4	1.77	3.04
621. Procurement	Jan. '57-Mar. '72	45.56	22.94	22.77	1.84	12.40	6	1.49	2.16
623. Gross obligations incurred outside the Federal Government for national defense	July '63-Mar. '72	(NA)	6.41	6.27	.81	7.74	6	1.51	2.68
625. Defense Department military prime contract awards for work performed in the United States, total	Jan. '57-Mar. '72	33.99	15.74	15.60	1.37	11.36	6	1.37	2.06
Defense Department gross unpaid obligations outstanding:									
643. Total	Jan. '57-Mar. '72	2.06	1.42	.91	.96	.95	1	2.84	2.84
644. Operations	Jan. '67-Mar. '72	5.20	2.58	2.42	.82	2.96	3	1.72	4.29
645. Procurement	Jan. '67-Mar. '72	2.58	1.88	1.16	1.27	.91	1	2.95	2.95
Manufacturers' new orders:									
647. Defense products industries	Jan. '57-Mar. '72	(NA)	15.11	14.89	.97	15.32	6	1.58	2.33
648. Defense products	Feb. '68-Mar. '72	22.24	17.00	16.75	1.50	11.16	6	1.40	2.32
*653. Average weekly overtime hours, production workers, defense products industries (hours)	Jan. '58-Mar. '72	.21	.14	.13	.05	2.76	3	2.21	3.43
*654. Accession rate, defense products industries (per 100 employees)	Jan. '58-Mar. '72	.39	.17	.16	.05	3.01	4	2.27	3.55
*655. Layoff rate, defense products industries (per 100 employees)	Jan. '58-Mar. '72	.17	.14	.14	.04	3.18	4	1.91	3.55
*656. Job vacancy rate, defense products industries (percent) ^(U)	Apr. '69-Mar. '72	.09	(NA)	.08	.05	1.71	3	2.69	5.50
657. Output of defense and space equipment	Jan. '54-Sep. '72	(NA)	1.04	.47	.89	.53	1	5.51	5.51
Manufacturers' inventories:									
658. Defense products industries	Jan. '57-Mar. '72	(NA)	1.04	.52	.85	.62	1	2.80	2.80
659. Defense products	Jan. '68-Mar. '72	1.90	1.90	1.39	1.36	1.02	2	2.63	4.90
Manufacturers' unfilled orders:									
660. Defense products industries	Jan. '57-Mar. '72	(NA)	1.23	.90	.83	1.09	2	2.76	3.42
661. Defense products	Jan. '68-Mar. '72	1.99	1.64	1.06	1.05	1.01	2	3.57	4.90
Employment in defense products industries:									
670. Total	Jan. '58-Mar. '72	.80	.73	.26	.66	.40	1	6.07	6.07
671. Production workers	Jan. '58-Mar. '72	1.08	.92	.46	.74	.61	1	3.78	3.78
673. Index of aggregate weekly man-hours, defense products industries	Jan. '58-Mar. '72	.94	.80	.36	.68	.53	1	4.86	4.86
675. Index of aggregate weekly payrolls, production workers, defense products industries	Jan. '58-Mar. '72	1.58	1.08	.66	.81	.82	1	3.15	3.15
Defense Department manpower:									
677. Military ^(U)	Jan. '57-Mar. '72	.67	(NA)	.27	.60	.45	1	3.96	3.96
678. Civilian ^(U)	Jan. '57-Mar. '72	.54	(NA)	.33	.44	.75	1	4.44	4.44
Defense Department net outlays:									
680. Total, military functions and military assistance	Jan. '57-Mar. '72	8.48	3.82	3.73	.79	4.70	6	1.73	3.11
681. Operations	July '59-Mar. '72	7.84	3.51	3.26	.77	4.25	5	1.58	2.47
682. Procurement	Jan. '57-Mar. '72	14.27	11.62	11.51	1.59	7.25	6	1.57	2.72
683. Budget outlays for the national defense function	Jan. '57-Mar. '72	(NA)	3.80	3.71	.71	5.23	6	1.64	3.05
685. Defense Department personnel compensation	Jan. '67-Mar. '72	2.47	1.87	1.58	.87	1.80	3	2.48	4.62
Manufacturers' shipments:									
687. Defense products industries	Jan. '57-Mar. '72	(NA)	2.69	2.49	.87	2.85	3	1.64	3.40
688. Defense products	Jan. '68-Mar. '72	7.95	4.57	4.63	.94	4.91	5	1.47	3.29
Ratio, manufacturers' unfilled orders to shipments:									
690. Defense products industries	Jan. '57-Mar. '72	(NA)	2.95	2.71	.96	2.82	4	1.90	3.81
691. Defense products	Jan. '68-Mar. '72	9.30	5.11	5.04	.86	5.83	6	1.79	2.81
Ratio, manufacturers' inventories to shipments:									
692. Defense products industries	Jan. '57-Mar. '72	(NA)	2.84	2.90	.72	4.01	5	2.46	5.74
693. Defense products	Jan. '68-Mar. '72	9.58	5.19	5.29	.84	6.26	6	1.79	3.21

NA = not available.

*Measures for these series are based on actual changes rather than percent changes (see definition below). ^(U) indicates measures are based on unadjusted data.

BRIEF DEFINITIONS OF MEASURES SHOWN IN PART 1

The measures in this appendix provide a historical perspective for interpreting current changes in each series. They are derived using the Census X-11 seasonal adjustment program. Brief definitions of the measures are given below; more complete definitions appear in *Electronic Computers and Business Indicators* by Julius Shiskin, issued as Occasional Paper 57 by the National Bureau of Economic Research, 1957 (reprinted from *Journal of Business*, October 1957).

" \bar{O} " is the average month-to-month percent change, without regard to sign, in the original unadjusted series. (See final paragraph below for exceptions to these definitions.)

" \bar{CI} " is the same for the seasonally adjusted series.

" \bar{C} " is the same for the short-term trend, which is a smooth, flexible moving average of the seasonally adjusted series.

" \bar{I} " is the same for the irregular component, which is obtained by dividing the seasonally adjusted series by the short-term trend.

" $\bar{I/C}$ " measures the relative smoothness (small values) or irregularity (large values) of the seasonally adjusted series. It is the ratio of the average monthly percent change (without regard to sign) in the irregular component to the average monthly percent change (without regard to sign) in the short-term trend.

"MCD" (months for cyclical dominance) estimates the number of months required for the short-term trend to dominate the irregular component. Average percent changes are computed for spans of from 1 to 12 months for both the irregular component and the short-term trend. MCD is the shortest span of months for which the average percent change (without regard to sign) in the short-term trend is greater than that in the irregular component. All MCD's greater than "5" are shown as "6".

Appendix B. AVERAGE CHANGES AND RELATED MEASURES OF VARIABILITY—Continued

"Average Duration of Run" (ADR) is another measure of smoothness and is equal to the average number of consecutive monthly changes in the same direction in any series of observations. When there is no change between two observations, a change in the same direction as the preceding change is assumed. The ADR is shown for the seasonally adjusted series (CI) and the MCD curve, which is a moving average (with the number of terms equal to MCD) of the seasonally adjusted series. A comparison of these measures with the expected ADR of a random series indicates whether the changes approximate those of a random series. In a random series, the expected ADR is 1.5 and the actual values fall between 1.36 and 1.75 about 95 percent of the time. For a moving average of a random series, the expected ADR is 2.

Measures for series identified with an asterisk (*) are computed by an additive method. This method is used for series with zero or negative data, series which could approach zero, and series expressed in percent. In this method, the measures are defined the same as above except for two differences: (1) the measures are based on actual month-to-month changes (rather than percent changes) and (2) the irregular component is obtained by subtracting the short-term trend from the seasonally adjusted series. The average changes shown above for the components of such a series are in the same unit of measure as the series itself. The unit is indicated in the series title.

Part 2. Quarterly Series

Series title	Period covered	\bar{O}	\bar{CI}	\bar{T}	\bar{C}	$\bar{T/C}$	QCD	Average duration of run (ADR)	
								CI	QCD
200. Gross national product	IQ '57-IQ '72	5.74	1.69	0.33	1.61	0.21	1	8.57	8.57
264. Federal Government purchases of goods and services, national defense ..	IQ '57-IQ '72	6.20	2.06	.76	1.73	.44	1	3.16	3.16
*546. Transfers under U.S. military agency sales contracts—exports (mil. dol.) ..	IQ '60-IQ '72	66.79	45.21	34.88	21.28	1.64	2	1.50	2.14
*547. Direct defense expenditures—imports (mil. dol.) ^(U)	IQ '60-IQ '72	31.29	(NA)	21.52	19.61	1.10	2	1.92	2.76
*613. National defense purchases as a percent of GNP (percent)	IQ '57-IQ '72 ....	.33	.18	.08	.16	.48	1	5.45	5.45
650. Manufacturers' new orders from the U.S. Government, aerospace industries	IQ '61-IQ '72	(NA)	17.36	15.66	5.47	2.86	3	1.33	1.83
664. Manufacturers' unfilled orders from the U.S. Government, aerospace industries	IQ '61-IQ '72	(NA)	3.78	2.23	2.60	.86	1	2.75	2.75
666. Defense Department progress payments outstanding ^(U)	IQ '57-IQ '72	4.96	(NA)	2.32	4.47	.52	1	2.40	2.40
689. Manufacturers' shipments to the U.S. Government, aerospace industries ..	IQ '61-IQ '72	(NA)	3.77	2.69	2.13	1.26	2	1.76	2.39
*696. U.S. Government cash receipts associated with military sales contracts (million dollars)	IQ '60-IQ '72	100.92	71.44	52.25	36.54	1.43	2	1.71	2.24

NA = not available.

*Measures for these series are based on actual changes rather than percent changes (see definition below). ^(U) indicates measures are based on unadjusted data.

BRIEF DEFINITIONS OF MEASURES SHOWN IN PART 2

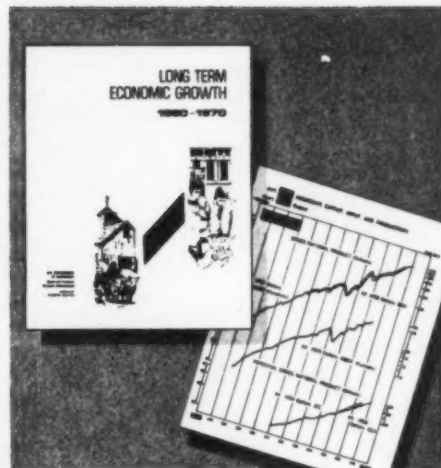
These measures are defined the same as those in part 1 except that they are based on quarter-to-quarter percent changes. For example, \bar{CI} is the average quarter-to-quarter percent change (without regard to sign) in the seasonally adjusted series.

In deriving "QCD" (quarters for cyclical dominance), average percent changes are computed for spans of from one to four quarters for the irregular component and the short-term trend. QCD is the shortest span of quarters for

which the average percent change (without regard to sign) in the short-term trend is greater than that in the irregular component. All QCD's greater than "3" are shown as "4". The "Average Duration of Run" (ADR) measures are also expressed in quarters.

As in part 1, measures for series identified with an asterisk (*) are computed by an additive method. This method is the same as that used for the monthly series except for the use of quarterly data rather than monthly.

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Series title	Series number	Current issue (page numbers)		Historical data (issue date)	Series descriptions (issue date)	Series title	Series number	Current issue (page numbers)		Historical data (issue date)	Series descriptions (issue date)
		Charts	Tables					Charts	Tables		
Accession rate, defense products industries	654	8	21	8/73	4/73	Inventories, manufacturers'	658	9	22	8/73	2/73
Aerospace industries						Defense products	658	9	...	1/72	2/73
Manufacturers' new orders from U.S. Government	650	See New orders.				Defense products industries	693	12	26	8/73	2/73
Manufacturers' shipments to U.S. Government	689	See Shipments.				Ratio to shipments, defense products	692	12	...	11/72	2/73
Manufacturers' unfilled orders from U.S. Government	684	See Unfilled orders.				Ratio to shipments, defense products industries					
Balance of payments (defense-related)						Job vacancy rate, defense products industries	656	8	21	8/73	4/73
Cash receipts associated with military sales contracts	696	13	27	9/73	10/73	Layoff rate, defense products industries	655	8	21	8/73	4/73
Direct defense expenditures	547	13	27	9/73	10/73	Man-hours, defense products industries	673	10	23	8/73	4/73
Transfers under military agency sales contracts	546	13	27	9/73	10/73	Manpower—See Civilian manpower and Military manpower.					
Budget outlays for national defense function	683	See Outlays.				Military manpower, Defense Department	677	10	24	9/73	8/68
Cash receipts associated with military sales contracts	696	See Balance of payments.				Military prime contract awards—See Contract awards.					
Civilian manpower, Defense Department	678	10	24	9/73	8/68	Net outlays, Defense Department—See Outlays.					
Compensation						New orders, manufacturers'					
Payrolls, aggregate weekly, defense products industries	675	10	23	8/73	4/73	Defense products	648	7	20	8/73	2/73
Personnel compensation, Defense Department	685	11	25	10/73	8/68	Defense products industries	647	7	...	11/72	2/73
Contract awards, military prime						From Government, aerospace industries	650	8	20	9/73	2/73
Aircraft	626	...	16	11/73	8/68	Obligations incurred, gross					
Civilian Health and Medical Program	638	...	19	...	...	Defense Department, operations	619	...	15	6/73	8/68
Combat vehicles	631	...	17	11/73	8/68	Defense Department, procurement	621	6	15	6/73	8/68
Construction	634	...	18	11/73	8/68	Defense Department, total	617	6	15	6/73	8/68
Contracts under \$10,000	636	...	19	11/73	5/68	Outside Government for national defense	623	6	16	6/73	10/73
Educational and nonprofit institutions	637	...	19	11/73	8/68	Obligations outstanding, gross unpaid					
Electronic and communications equipment	630	...	17	11/73	8/68	Defense Department, operations	644	...	20	9/73	8/68
Missile and space systems	627	...	16	11/73	8/68	Defense Department, procurement	645	...	20	9/73	8/68
Other hard goods	632	...	18	11/73	8/68	Defense Department, total	643	7	20	9/73	8/68
Services	635	...	18	11/73	8/68	Operations, Defense Department					
Ships	628	...	17	11/73	8/68	Net outlays	681	See Outlays.			
Soft goods	633	...	18	11/73	8/68	Obligations incurred	619	See Obligations incurred.			
Total	625	7	16	11/73	8/68	Unpaid obligations outstanding	644	See Obligations outstanding.			
Weapons and ammunition	629	...	17	11/73	8/68	Orders—See New orders and Unfilled orders.					
Work outside the U.S.	640	...	19	11/73	8/68	Outlays					
Defense and space equipment, output	657	See Output of defense and space equipment.				Budget outlays for national defense function	683	11	25	10/73	10/73
Defense Department						Defense Department, operations	681	...	24	9/73	8/68
Gross obligations incurred—See Obligations incurred.						Defense Department, procurement	682	11	25	9/73	8/68
Gross unpaid obligations outstanding—See Obligations outstanding.						Defense Department, total	680	11	24	9/73	8/68
Manpower—See Civilian manpower and Military manpower.						Output of defense and space equipment	657	9	22	8/73	10/73
Military prime contract awards—See Contract awards.						Overtime hours, defense products industries	653	8	21	8/73	4/73
Net outlays—See Outlays.						Payrolls, aggregate weekly, defense products industries	675	See Compensation.			
Personnel compensation	685	See Compensation.				Personnel compensation, Defense Department	685	See Compensation.			
Progress payments outstanding	666	See Progress payments.				Procurement, Defense Department					
Direct defense expenditures	547	See Balance of payments.				Net outlays	682	See Outlays.			
Employment						Obligations incurred	621	See Obligations incurred.			
Accession rate, defense products industries	654	See Accession rate.				Unpaid obligations outstanding	645	See Obligations outstanding.			
Employment, production workers, defense products industries	671	10	23	8/73	4/73	Progress payments outstanding, Defense Department	666	9	22	9/73	8/68
Employment, total, defense products industries	670	10	22	8/73	4/73	Purchases of goods and services for national defense	264	See Gross national product.			
Job vacancy rate, defense products industries	656	See Job vacancy rate.				Shipments, manufacturers'					
Layoff rate, defense products industries	655	See Layoff rate.				Defense products	688	12	26	8/73	2/73
Man-hours, defense products industries	673	See Man-hours.				Defense products industries	687	12	...	11/72	2/73
Manpower—See Civilian manpower and Military manpower.						Ratio, inventories to shipments, defense products industries	692	See Inventories.			
Overtime hours, defense products industries	653	See Overtime hours.				Ratio, unfilled orders to shipments, defense products industries	691	See Unfilled orders.			
Expenditures—See Outlays.						Ratio, unfilled orders to shipments, defense products industries	690	See Unfilled orders.			
Federal purchases of goods and services for national defense	264	See Gross national product.				To Government, aerospace industries	689	12	26	9/73	2/73
Gross national product						Transfers under military agency sales contracts	546	See Balance of payments.			
Federal purchases of goods and services for national defense	264	5	14	9/73	10/73	Unfilled orders, manufacturers'					
Gross national product	200	5	14	9/73	10/73	Defense products	661	9	22	8/73	2/73
National defense purchases as percent of GNP	613	5	14	9/73	10/73	Defense products industries	660	9	...	7/71	2/73
Gross obligations incurred—See Obligations incurred.						From Government, aerospace industries	664	9	22	9/73	2/73
Gross unpaid obligations outstanding—See Obligations outstanding.						Ratio to shipments, defense products industries	691	12	26	8/73	2/73
						Ratio to shipments, defense products industries	690	12	...	11/72	2/73
						Unpaid obligations outstanding—See Obligations outstanding.					

